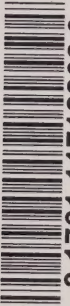


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ROYAL COMMISSION ON HEALTH SERVICES

# Psychiatric Care in Canada: Extent and Results

ALEX RICHMAN

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ROYAL COMMISSION ON HEALTH SERVICES

# PSYCHIATRIC CARE IN CANADA: EXTENT AND RESULTS

Alex Richman, M.D.

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## PREFACE

Information on the extent and results of psychiatric care is essential for evaluation and planning. In order to obtain such information for Canada, this project was initiated by the Royal Commission on Health Services. This study gives an epidemiologic perspective. The organization of psychiatric services is discussed in the study, *Trends in Psychiatric Care*, by Professor D. G. McKerracher.

The working of various Canadian psychiatric services is described in terms of the extent of use, the characteristics of users, and some results. This study attempts to define the current allocation of various services, the demands made upon them and to establish some baselines against which future changes might be realistically assessed. In addition, the core problem of evaluation is outlined.

The system of national mental health statistics operated by Dominion Bureau of Statistics is reviewed. In addition this study includes detailed reports of psychiatric care in a number of provinces and communities; and analyzes the use of private psychiatric care by the members of several prepaid medical insurance plans. The nature of the information needed for future evaluation, and the means by which such information might be derived, are also considered.

Definition and design of this project began in late 1961. Most of the data were collected and analyzed during 1962, while the author was on a leave of absence from the University of British Columbia. An initial draft of the manuscript, completed in the summer of 1963 for the Commissioners, was revised and prepared for publication during the fall of 1964 and the summer of 1965.

Many individuals and organizations worked on various parts of this project, and to all of them formal thanks is offered.

Dominion Bureau of Statistics answered numerous questions relating to detail and methods, and the Public Health Section of their Health and Welfare Division performed the complex collations and analyses required for Chapters 13-15.

Extensive information on the use of psychiatric care by their members was freely given by Medical Services Association (Vancouver), Medical Services (Alberta) Inc., and Credit Union and Co-operative Health Services Society (Vancouver).

Many individuals contributed to the survey of psychiatrists' care in Moose Jaw and London. The assistance of Professor G. E. Hobbs and Dr. P. O. O'Reilly in supervising the personnel involved in the collection of local data, and the co-operation of Dr. F. S. Lawson, Dr. B. McNeel, and Dr. A. H. Sellers are particularly appreciated.

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It is emphasized that the interpretation and conclusions of this study are my own responsibility.

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PART I

AN INTRODUCTION AND SOME CONCLUSIONS





## THE NATURE OF THE PROBLEM

"It has long been a recurring nightmare experienced by this reviewer that he was a mental hospital administrator facing a legislator who was a thorough and experienced scientist and methodologist and that he was confronted with the demand that he justify his programme and expenditures on the basis of demonstrated need and efficacy. As part of the nightmare the reviewer advanced, one after the other, the usual mental health salesman's arguments and discussion. These, in turn, brought on the little and obvious questions that any scientifically oriented individual would direct to tear such arguments to shreds, ending with the simple, and I fear justified, observations to this effect: 'Doctor, do you mean to tell me that you have been spending billions of dollars for over a century and yet have the temerity to tell me that you have not tested experimentally or even epidemiologically the components of your programme for which you are now asking additional millions? What have you been doing with the money that we gave you for research? Aren't you at all uncomfortable working in the dark, or don't you realize that you are working in the dark? Doctor, what do you know about research and scientific method? Could you tell me how you would go about testing the efficacy of this part or that part of your programme? Have you any proof that you are not doing harm? Doctor, do you have any reasons why you should not be brought up on charges of malfeasance and misfeasance?'

"On awakening from such nightmares this reviewer is unable to decide whether it is fortunate or unfortunate that such legislators do not exist. It is specifically in expectation of such confrontation that expert reports are necessary. However, it is obvious that concomitant with such reports, the necessary action must be taken to evaluate objectively the programme as a whole and the important and expensive constituents singly. How, otherwise, can improvements be made?"<sup>1</sup>

### Introduction

Psychiatry is the medical science which deals with diseases of the mind.<sup>2</sup> Major disability is produced in all parts of society by psychoses, psychoneuroses, personality and behaviour disorders, mental retardation and various emotional reactions.

Canada has a system of segregated mental health services which are over-burdened with large numbers of hospitalized patients remaining from past years and an unrequited demand for additional care for new patients. Although

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<sup>1</sup>Pasamanick, B., Special Comment, Action for Mental Health: Final report of the Joint Commission on Mental Illness and Health, *Amer. J. Orthopsychiat.* 32:539-550, 1962.

<sup>2</sup>Oxford Dictionary.

community psychiatric services can provide effective care, few Canadians live in areas where such services are quantitatively available or financially feasible.

Despite marked improvements in the effectiveness of psychiatric care, recent advances have not been uniformly implemented throughout Canada. Reliable data on the extent and results of psychiatric care are not available for the evaluation of present services and the planning of new programmes. This study intends to provide information and methods which can be used for such evaluation and planning.

### Psychiatric Illness as a Major Health Problem

The volume of hospitalization for psychiatric illnesses is equivalent to that dispensed in *all* Canadian public general hospitals.<sup>3</sup> If present trends continue, it is estimated that one out of eight infants will be hospitalized in a psychiatric institution before death.<sup>4</sup> At the end of 1960 there were over 75,000 patients under the care of mental institutions which spent \$116 million<sup>5</sup> during the year and provided inadequate care.

In default of adequate community care many patients are consigned to remote mental hospitals and institutions for the mentally retarded. These mental hospitals (to which less than one-fifth of first admissions are voluntary)<sup>6</sup> are obsolete in structure and function. For patients hospitalized for more than two years, leaving hospital by death is more likely than discharge.<sup>7</sup> To an increasing extent psychiatric institutions contain patients with mental retardation, elderly patients who have grown old while in hospital or have been admitted with psychoses of the senium, and long-stay patients with schizophrenia. At the end of 1960, there were about 50,000 long-stay patients in psychiatric institutions. The cumulative hospital costs are high for these patients who represent the burden of the past, the patients crippled by the previous pattern of care.<sup>8</sup>

In addition to the severe psychiatric illnesses requiring hospital care or treatment by psychiatrists, there is a large mass of emotional symptoms and minor psychiatric illnesses, which come to the attention of family physicians. No reliable data exist on the extent of these disorders which exert their toll upon the community in terms of underproductivity and economic wastage, and over-utilization of scarce, expensive, and ineffective<sup>9</sup> health services.

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<sup>3</sup>During 1960, 25 million patient days were spent in psychiatric institutions and in public general hospitals. Dominion Bureau of Statistics, *Hospital Statistics, 1960*, Vol. I, General Information, Ottawa: Queen's Printer, 1962.

<sup>4</sup>See Chapter 13.

<sup>5</sup>Excluding psychiatric divisions of general hospitals.

<sup>6</sup>See pp. 68-70.

<sup>7</sup>See pp. 80-81.

<sup>8</sup>These hospitalized patients have had their disability increased by characteristics inherent in the mental hospital. "...much of the symptomatology traditionally associated with chronic schizophrenia and other disorders is brought about by prolonged incarceration in an impoverished and unnatural social situation." American Public Health Association, Subcommittee on Tertiary Prevention of the Program Area Committee on Mental Health (Williams, R. H. [Ed.], *The Prevention of Disability in Mental Disorders*, Mental Health Monograph 1, United States Department of Health, Education, and Welfare, Washington: United States Government Printing Office, 1962.

<sup>9</sup>Ineffective for psychiatric illness.

## Previous Surveys of Canadian Psychiatric Services

### *Provincial Surveys*

There have been many provincial surveys by various Royal Commissions, and the Canadian Mental Health Association. Subsequent to the First World War, the Canadian Mental Health Association (then the Canadian National Committee for Mental Hygiene) initiated provincial mental health surveys. Over the years, nearly all of the provinces were surveyed at the request of the provincial authorities. The staff of the Canadian Mental Health Association reviewed legislation, administration and personnel, the structure of mental hospitals, their psychiatric programmes and living conditions, and community services. The provincial surveys, conducted by personnel familiar with the development and trends of Canadian mental health services, were relatively comprehensive, and indeed, much in advance of contemporary practice.

### *National Surveys*

A national report on public health, prepared for the Rowell-Sirois Commission by Graver in 1939, referred to the need for additional mental hospital accommodation. In 1943 the Parliamentary Special Committee on Social Security devoted a session to psychiatric care at which time a brief, presented by various Directors of Provincial Mental Health Services and several University Professors of Psychiatry, emphasized the importance of general hospital psychiatry:

"The realization that the mentally sick are really sick people who may need very complete examinations and consultations for diagnosis and adequate treatment calls for the establishment of properly equipped wards in all general hospitals of fifty beds or more (and at least one or more properly equipped rooms in smaller hospitals. Limitations of time and space do not permit a lengthy discussion of this most important development but we feel it is essential to the proper care of citizens who may develop mild or severe mental disorders.) Such a ward would be for short treatment only; prolonged illnesses would be cared for in mental institutions."<sup>10,11</sup>

In the national survey of health resources, conducted during the Second World War by the Canadian Procurement and Assignment Board, the shortage of adequate accommodation for the institutional care of the insane, feeble-minded and the epileptic was recognized. Psychiatric wards of general hospitals were felt to be justified because of the close association of mental and somatic diseases, but emphasis was placed upon the need for sufficient financing of such services.<sup>12</sup>

During 1950-51 the National Health Grants Program sponsored provincial health surveys to assist in setting up the machinery necessary to ensure the most effective use of the health grants, in planning the extension of hospital accommodation, and the proper organization of hospital and medical care insurance.<sup>13</sup> Each of these provincial surveys made particular recommendations regarding mental health services. These recommendations included various aspects of hospital accommodation, personnel, training, research, community

<sup>10</sup>Canada, House of Commons, Special Committee on Social Security, Minutes of Proceedings and Evidence, No. 11, May 18, 1943, pp. 315-338.

<sup>11</sup>This paragraph was re-emphasized in Dominion Provincial Conference on Reconstruction, Health, Welfare and Labor Reference Book, Ottawa; King's Printer. 1945. p. 20.

<sup>12</sup>Canadian Medical Procurement and Assignment Board, *Report of the National Health Survey*, Ottawa: King's Printer, 1945, pp. 147-148.

<sup>13</sup>Department of National Health and Welfare, *National Health Grants, 1948-1961*, Ottawa: Queen's Printer, 1962, p. 9.



clinics, and consultation services. In the main, the recommendations referred to the expansion and extension of the existing structure and pattern of services, although some reports recommended:

- Adequate co-ordination of mental health services with health services generally.
- Development of psychiatric units in principal, regional general hospitals.
- Establishment of community mental health clinics located, where possible, in public general hospitals.
- Provision of sufficient funds to universities to train psychiatrists and other professional personnel to relieve the present shortage and to make possible the recommended mental health programme.
- That the programmes concerning the treatment of mental diseases, professional training and research in this field take their inspiration from the scientific directives of our universities.

These surveys confirmed in statistical form the deplorable state of mental illness in Canada at that time. They pointed out the great shortage of psychiatrists and of personnel equipped with medical training to meet this problem, the lack of personnel generally, the lack of institutional facilities in many provinces. Health workers and governments all over the country were felt to have been given an opportunity of making an assessment so that they could at long last in a co-operative way begin to tackle this extremely serious problem.<sup>14</sup>

#### *Mental Health Services in Canada, 1954*

Canadian mental health services were described by the Department of National Health and Welfare in 1954. The desirable *future* goals for improved mental health services were listed<sup>15</sup> as:

- More adequate development of the central mental health divisions.
- Further improvement of both the medical and non-medical aspects of mental hospital administration.
- Better integration of psychiatric programmes with other health services and a more widespread recognition of mental health services as community services.
- A reassessment of the training programmes for mental health workers.
- Evaluation of the present research efforts.

Although the construction of a total of 11,779 beds<sup>16</sup> had been approved for Federal Mental Health grant assistance between 1948 and 1954 this study noted that no standard plan

"... with respect to either size or design, had governed the original construction or the expansion of Canada's mental hospitals. As the demand for additional accommodation increased, new wings were added and/or new independent units were built, usually clustered around the original building."<sup>17</sup>

#### *Failure to Implement Recommendations*

The failure to implement recommendations made by the provincial health surveys regarding mental health services were discussed in 1955 by the National

<sup>14</sup> Martin, Hon. Paul, *Canada Parl. H. C. Debates Sess.*, 105 (13) : 506-510, Dec. 5, 1960.

<sup>15</sup> Department of National Health and Welfare, Research Division, *Mental Health Services in Canada*, General Series, Memorandum No. 6, Ottawa: Queen's Printer, 1954. pp. 188-189.

<sup>16</sup> *Ibid.*, p. 45.

<sup>17</sup> *Ibid.*, p. 58.



Scientific Planning Council of the Canadian Mental Health Association.<sup>18</sup> Some of the reasons included the following:

- Economic*—meaning not only the lack of money, but also the way in which money was allocated and administered.
- Formal and Informal Tensions* between different interested parties connected with the provision of mental health facilities and services in a particular context—e.g., the government, the university, lay organizations, and so on.
- Lack of a Clearly Formulated Over-all Programme* for the provision of mental health services throughout a particular region.
- The Lack of Clearly Defined Premises* upon which to base recommendations for facilities or services. The recommendations for particular standards frequently do not appear to have been based upon a clear rationale... so many hospital beds are recommended, for example, but the reasons for recommending that particular number or that type of physical plant is not given.
- Public Attitude.* Another important factor influencing the development of mental health services has been the attitude of the public towards such services and towards expenditures for facilities and personnel. In this connection, it was felt that a consideration of mental health services should also include a consideration of the ways in which any recommendations should be implemented.
- Lack of Personnel.* Despite the great increase of personnel in mental health facilities the rate of training new personnel in all categories has continued to lag far behind the demand. Where the shortage of trained staff persists the hospitals will tend to regress from active treatment centres to custodial units.

#### *Canadian Mental Health Association, 1955-1962*

In 1955 the Canadian Mental Health Association appointed a standing Committee on Psychiatric Services to review the Canadian situation and to develop standards and principles upon which an evaluation could be based. It was felt that merely to strive for more money, more services, more staff and better conditions within the existing patterns of care was not enough; nothing short of a radical new concept of treatment and care was needed.<sup>19</sup>

The major recommendations of this report were:<sup>20</sup>

- Integration of psychiatric services with the physical and personnel resources of the rest of medicine.
- Regionalization of psychiatric treatment services in centres of population, and establishment of a wide range of psychiatric services in the larger communities.
- Decentralization of the management and administration of psychiatric services.
- Close co-operation among treatment personnel and the co-ordination of psychiatric services to ensure that the patient receives appropriate help in his community through all phases of his illness without interruption; and that recruitment, training and career programmes for professional personnel in the mental health field be rapidly increased and improved.
- Co-ordination of local psychiatric services in hospitals, clinics and other centres to promote maximum effectiveness.

The report stressed that the lack of substantial and reliable data on evaluation was one of the most difficult problems facing psychiatry. Maintenance of standards of patient care was regarded as essential to any health service and

<sup>18</sup> Canadian Mental Health Association, *Mental Health Services in Canada*, Interim report No. 1, Background and Summary of Basic Principles, Toronto: The Association, 1961, pp. 3-4.

<sup>19</sup> Tyhurst, J. S., et al., *More for the Mind, a Study of Psychiatric Services in Canada*, Toronto: Canadian Mental Health Association, 1963, p. 15.

<sup>20</sup>*Ibid.*, pp. 39-45.

periodic evaluation of the quality of patient care by an independent agency was recommended.<sup>21</sup>

### *The MacNaughton Resolution, 1960*

Prior to the establishment of the Royal Commission on Health Services the need for a national survey of the problems of mental illness was recognized by the House of Commons. In December 1960 the House debated and accepted a resolution, introduced by Mr. Alan MacNaughton, that the government should consider the advisability of co-operating with the provincial authorities and such professional and other groups as may be interested, in making a national survey of the extent of mental illness, its causes, problems, and methods of treatment.<sup>22</sup>

"It seems to me that it is reasonable to suggest it might be useful again in the face of the situation as it now exists that we should perhaps make sure once again that we have a clear picture of the problem in Canada. It is not that we think it is any more serious than in any other comparable country, but in our effort to tackle this problem we want to make sure precisely what is its nature."<sup>23</sup>

### **The Need for Evaluation**

"J'aime la statistique en médecine, parce que je crois à son utilité; aussi, depuis trente ans, m'en suis-je aidé dans mes travaux sur les maladies mentales. C'est le meilleur instrument pour mesurer l'influence des localités, du régime et des méthodes de traitement."

Esquirol, 1838<sup>24</sup>

The need for reliable evaluation of psychiatric care has long been a major concern.<sup>25</sup> Although deficiencies in service, personnel and facilities are obvious, it is necessary to find areas of greatest need (for the best allocation of scarce services); to evaluate the effectiveness of various methods of care; and to establish base lines against which progress might be measured.<sup>26</sup>

Provision for measurement in terms of effectiveness and efficiency should be routinely built into every mental health programme. Without records of indications, expectations and actual results mental health services may be said to be run for the pleasure of an outfit rather than for any lasting benefit to patients and to any store of experience.<sup>27</sup> It is no longer possible to justify mental health programmes on the basis that all activities are worthwhile. It is necessary to determine the results of such activities.

<sup>21</sup> *Ibid.*, p. 203.

<sup>22</sup> House of Commons Debates, *Parl. H. C. Debates Sess.*, 105 (13) :487-525, Dec. 5, 1960.

<sup>23</sup> Martin, Hon. Paul, *Canada Parl. H.C. Debates Sess.*, *op. cit.*

<sup>24</sup> Esquirol, J. E. D., *Des Maladies Mentales Considérées Sous les Rapports Médical, Hygiénique et Médico-Légal*, 2 Volumes and Atlas, J. B. Baillière, Paris, 1838.

<sup>25</sup> Various aspects of evaluation of health services in general are described in Appendix 1-1.

<sup>26</sup> Felix, R. H., and Kramer, M., Research in epidemiology of mental illness, *Publ. Hlth. Rep., Wash.*, 67:152-160, 1957.

<sup>27</sup> Meyer, A., Excerpts from the Twenty-First Annual Report of the State Commission in Lunacy, Sept. 30, 1909 in: *The Collected Papers of Adolf Meyer*, Vol. II, Baltimore: The Johns Hopkins Press, 1951, pp. 157-163.

Training in appropriate methods of quantitative evaluation has been described as *essential* for the professional mental health worker in the community.<sup>28</sup> At central administrative levels it is necessary to have specific provision, either a person or organization, for the evaluation of programmes and results in addition to those especially responsible for programmes, and for training.<sup>29</sup> Such training, and central<sup>30,31</sup> provision for the evaluation of programmes is scarce in Canada.

The continuation, alteration, development or expansion<sup>32</sup> of psychiatric services should be accompanied by appropriate provision for evaluation. Lack of concomitant evaluation represents an inefficient use of scarce resources. In addition specific clinical trials of the effectiveness of different therapeutic methods are necessary. These trials must clarify two main points.<sup>33</sup>

What are the essential features of the treatment programme, and what parts can be dropped without impairing its therapeutic efficacy?

What is the *minimum* education and training necessary for each of the persons who will participate in carrying out the treatments?

Such clinical trials have been described for comparing home versus hospital care for schizophrenics<sup>34,35</sup>, and general hospital care for certified patients.<sup>36</sup>

In Canada, Grauer had emphasized to the Rowell-Sirois Commission that one of the essential features for conditional grants-in-aid by the federal

<sup>28</sup>American Public Health Association, Program Area Committee on Mental Health, *Mental Disorder, A Guide to Control Methods*, New York: The Association, 1962, p. 71.

<sup>29</sup> Querido, A., Mental health programs in public health planning, *Ment. Hyg.* (N.Y.), 46:626-654, 1962.

<sup>30</sup> This applies at provincial levels also.

<sup>31</sup> In the Department of National Health and Welfare "The Mental Health Division promotes better standards and evaluates requirements for Canada's mental health services". Department of National Health and Welfare, Research and Statistics Division, *The Administration of Public Health in Canada*, Ottawa: Queen's Printer, 1958, p. 103.

<sup>32</sup> A study of eight mental health centres in Minnesota during 1958-59 concluded that as the size of the staff increases, the amount of actual, recordable work done by each individual appears to decrease. Vail, D. J., Strategy in evaluating the effectiveness of community mental health programs, *Pub. Hlth Rep.*, Wash. 76: 975-978, 1961.

<sup>33</sup> World Health Organization, *Tenth Report of the Expert Committee on Mental Health, Programme Development in the Mental Health Field*, WHO Tech. Rep. Ser. 223, 1961, p. 47.

<sup>34</sup> Patients committed to a mental hospital and diagnosed as schizophrenic, but for whom the family was willing to assume responsibility for home supervision, were randomly assigned to either a drug home-care group, a placebo home-care group, or a hospital control group. During the first eighteen months of the experiment, among the home-care group given drugs 88% of the possible days were spent at home, while the placebo patients spent nearly 82% at home. The cases assigned to hospital care spent 60% of this time in the community, considerably less than either the placebo or the drug home-care patients. It was noted that virtually all of the many problems associated with the home-care program, also applied to a considerable degree when the patients returned home after customary hospitalization. Pasamanick, B., Home vs. hospital care for schizophrenics, *J. Amer. Med. Ass.* 187:177-181, 1964.

<sup>35</sup> Dinitz, S., et al., An experimental study in the prevention of hospitalization of schizophrenics, *Amer. J. Orthopsychiat.*, 35:1-9, 1965.

<sup>36</sup> Smith, C. M., McKerracher, D. G., and McIntyre, S., Care of the certified psychiatric patient in the general hospital. The Saskatchewan Project, *Canad. med. Ass. J.*, 88:360-364, 1963.



government for health problems was that "...the results can be measured with some exactness".<sup>37</sup>

In the final report of the Commission it was stated that:  
 "Provided provinces are not thereby tempted to forego or starve other needed services, we can see no serious objection to small grants-in-aid for particular provincial services, and especially for specialized health services where scientific standards for measuring efficiency are relatively easy to apply..."<sup>38</sup>

In 1961 the rules for the administration of the National Health Grants Programme were described as being based on the two principles of provincial control over the health programmes assisted and developed with funds available from the grants, and economical and efficient utilization of grants funds.

"Each project submitted by a province is studied in the Department of National Health and Welfare, first, from the standpoint of its purpose and the soundness and practicability of the methods for carrying it out and, secondly, from the point of view of its compliance with the terms of the Appropriation Act, the General Health Grants Rules, the Minister's rulings and other pieces of legislation which have a bearing on the operation of the program. This scrutiny is carried out by the National Health Grants administration in close cooperation with consultants within the various divisions of the Department and, in some instances, with experts outside the government service. A close working relationship is maintained with the department's chief treasury officer..."

"The purpose of this review is not only to evaluate the project but also to co-ordinate provincial efforts for the preservation and improvement of the health of the Canadian people as a whole..."<sup>39</sup>

A report of the contribution of the National Health Grants programme described changes which had occurred in psychiatric services between 1948 and 1961.<sup>40</sup>

Some of the changes were:

An advisory committee on mental health, consisting of provincial directors of mental health services and others, "convened and actually saw all of their confrères for the first time! It was possible to develop and have intensive national planning."

*During this period the ratio of additional mental hospital accommodation provided per capita was 10 times greater in Canada than the United States.*<sup>41</sup>

"...Individual bursaries for training, either for a full academic year or more, or for short courses and institutes, were provided to 784 psychiatrists, 552 psychiatric nurses, 40 electro encephalograph technicians, 397 psychologists, 507 psychiatric social workers and to many other categories of professional workers...who found employment in mental health services."

<sup>37</sup> Department of National Health and Welfare, *National Health Grants, 1948-1961, op. cit.*, p. 6.

<sup>38</sup> Report of the Royal Commission on Dominion-Provincial Relations, 1954 Edition, Vol. 2, p. 54.

<sup>39</sup> Department of National Health and Welfare, *National Health Grants, 1948-1961, op. cit.*

<sup>40</sup> *Ibid.*, pp. 134-139.

<sup>41</sup> See p. 43.



*The number of unduplicated psychiatrists receiving bursaries is less than 784. During the first eight years of the programme 83 individuals had completed formal training courses in psychiatry.*<sup>42</sup>

*"Provincial mental health divisions were strengthened. Some appointed consultants in such fields as psychology and social work. The provinces which did so had the most success in recruiting essential treatment personnel."*

*It is not known to what extent the employment of consultants in provincial mental health divisions has resulted in increased or improved patient care, or what effect this has had in preventing illness, providing early diagnosis and treatment, or reducing disability.*

*"The effect of intensive recruiting and training and the availability of Hospital Construction Grant have led to a heartening change in conditions within the public mental hospitals: higher professional and semi-professional status of staff, better leadership and improved physical surroundings."*

*Are patients in mental hospitals getting "more" or "better" care since 1948? Are patients leaving earlier, and has the number of long-stay patients decreased?*

*"The development of new drugs has aided the advent of the 'open-door policy'."*

*In 1960, three-fourths of patients in mental hospitals were not in open wards.*<sup>43</sup>

*"Community mental health clinics, day hospitals, psychiatric units in general hospitals showed an encouraging increase during the period under review. . . It is thus possible for patients more often to be treated in the early stages of illness, often entirely on an out-patient basis."*

*How many patients are being treated in the early stages of illness and how often are they being treated entirely on an out-patient basis?*

*"About 53 per cent of the funds for national mental health grants went to mental hospitals, 23 per cent to clinics and psychiatric units and 13 per cent for training."*

*Is this the most effective distribution of this money?*<sup>44</sup>

The report concludes with a statement that "mental health grants assistance will receive continuing study to support provincial efforts to move from older patterns of health care to the implementation of the most modern concepts".

*What criteria would be utilized to determine whether communities or provinces are moving from older patterns of health care to the implementation of the most modern concepts?*<sup>45,46,47</sup>

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<sup>42</sup>See pp. 164-165.

<sup>43</sup>See Appendix 1-2.

<sup>44</sup>During the first five years (1948-1953) a higher proportion was spent on training (20 per cent) than during the total 13 years (13 per cent). See Appendix 1-3.

<sup>45</sup>The federal requirements for the planning of mental health services in the United States are described in Appendix 1-4.

<sup>46</sup>"Mental health programmes expand in many directions, sometimes according to a careful plan and sometimes in response to local pressures for services. The administrative organization of programmes varies, each pattern having its advocates and critics. Mental health as a field is noted for a prevalence of opinions over facts, but nowhere is this allegation so true as in the matters of administration."

World Health Organization, Tenth Report of the Expert Committee on Mental Health, *Programme Development in the Mental Health Field*, WHO Tech. Rep. Ser., op. cit., p. 47.

<sup>47</sup>See Appendix 1-5.

## Purpose and Method of this Study

This study relates to psychiatric care, and particularly to the hospital and out-patient facilities specifically intended for patients with psychiatric illnesses. It is recognized that not all patients with psychiatric illnesses are cared for by the psychiatric services discussed in this study; and that there is a wide range of professions, institutions and community resources involved in the maintenance of mental health, and the prevention, treatment and rehabilitation of psychiatric illnesses. However, it has not been possible to encompass those non-psychiatric community services or health, education, welfare, and correction agencies which affect mental health or provide care for persons with psychiatric illnesses, or to estimate the extent, nature and results of such care.

Within the time and financial limitations of this study it was decided to focus on some estimates of the *extent* and *results* of psychiatric care. It was recognized that it was not feasible to describe the extent and results of all forms of care, and that it was preferable to ask appropriate questions that could be answered.<sup>48</sup>

There are neither reliable nor valid methods for estimating the extent and nature of psychiatric illness in the general population.<sup>49, 50</sup> Rather than conducting another statistically significant but clinically immaterial survey<sup>51</sup> of the general population it was decided to focus upon the portion of morbidity receiving some form of clinical attention from psychiatrists or other types of physician.<sup>52</sup> This decision recognized that only a portion of those with psychiatric illness are subject to attending a physician, being recognized and recorded as having a psychiatric illness, or being referred to a psychiatrist for further consultation or care. However, particular attention was directed to ascertaining recorded morbidity among populations with an increased potential for the recording of such morbidity, as in members of prepaid medical insurance plans, and the population of geographic areas with an increased concentration of psychiatric facilities. Psychiatric disability unattended or unrecognized by physicians was largely excluded. The derived measures of extent were based on *clinical* utilization of *medical or psychiatric facilities*. This concern with clinical categories handled by physicians is preferable to undifferentiated studies of 'global mental disorder'.<sup>53</sup>

<sup>48</sup> "Any fool can ask a question; the trick is to ask one that can be answered. Breadth is desirable in any psychosocial research, but loss of the 'question-that-can-be-answered' is too high a price to pay for the 'broad' outlook. Comprehensiveness is too high a price to pay if it involves the loss of the critical question of the experiment, and is not warranted as the overriding objective of experiments." Lemkau, P.V., & Pasamanick, B., Problems in evaluation of mental health programs, *Amer. J. Orthopsychiat.* 27:55-58, 1957.

<sup>49</sup> Richman, A., Assessing the need for psychiatrists' care. A review of the validity of epidemiologic surveys, in press, *Canad. Psychiat. Ass. J.*

<sup>50</sup> "The difficulty in reaching such an assessment is that a simple counting of persons with 'psychiatric symptoms' is insufficient. There must be decision as to cases requiring treatment... in assessing need, it is felt that estimates are required immediately of persons requiring the clinical time of a psychiatrist in some type of clinical facility." Tyhurst, J.S., et al., *More for the Mind*, op. cit., p. 35.

<sup>51</sup> Fletcher, C.M., Epidemiologist and clinical investigator (President's Address), *Pros.roy.Soc. Med.* 56:851-858, 1963.

<sup>52</sup> In other branches of medicine the need for care has been defined in terms of the utilization of available care. "The receipt of care for a condition is usually rather good evidence that care is needed." Stevenson, G.S. (Ed.), *Transactions of the Fourth Conference on Administrative Medicine*, Oct. 31-Nov. 2, 1955, Princeton, N.J., New York: Josiah Macy Jr. Foundation, 1956, p. 21.

<sup>53</sup> Group for the Advancement of Psychiatry, Committee on Preventive Psychiatry, *Problems of Estimating Changes in Frequency of Mental Disorders*, Report No. 50, New York: The Association, 1961.

The results of psychiatric care were evaluated quantitatively. Since the objectives of hospitalization were considered to include the return of patients to the community, the indices selected were those relating to rates of separation and readmission, retention ratios, and hospital utilization. In the study of members of prepaid medical insurance plans results were described in terms of costs and duration of psychiatrists' care, and the volume of medical care prior and subsequent to psychiatric consultation.

The national system of mental health statistics was reviewed in terms of available data, and with particular regard to the information essential for programme planning and evaluation. More detailed descriptions of the purpose and methodology of the various enquiries undertaken for this study are found in later chapters.

## **Summary of Conclusions**

### *Purpose of Summary*

A summary of some of the conclusions in other chapters follows. This brief synopsis does not include all of the findings, but is intended as an epitome.

### *National Statistics on Psychiatric Care*

Part II discusses various aspects of national statistics on psychiatric care published by the Dominion Bureau of Statistics, and the types of additional data and analyses which are essential for the evaluation and planning of both present and future psychiatric services.

Chapter 2 reviews the present and possible functions of the Dominion Bureau of Statistics. The objectives for a national system of mental health statistics are not being fulfilled. Major revision of the system is required to provide reliable, valid and useful statistics. Particular provision must be made for increased collaboration between the Dominion Bureau of Statistics and users and suppliers of statistics. Pertinent analyses and interpretations of national statistics on mental illness are deficient, and must be provided in future by the Dominion Bureau of Statistics or some other suitable agency. Intensive studies of local areas must be facilitated, and longitudinal studies of patients developed and maintained.

Chapter 3, *Changes in Psychiatric Care and Accommodation*, outlines some of the directions which hospital care for psychiatric illness has taken between 1932 and 1960. Marked provincial differences in the type and amount of accommodation exist and there are considerable discrepancies in the availability of in-patient care throughout Canada. Federal assistance for construction during 1948-61 was largely directed to the reduction of overcrowding in mental hospitals and institutions for the mentally retarded, and was in large part based on unrealistic estimates of needs.

Characteristics of various types of in-patient institutions are delineated in Chapter 4. Although psychiatric units of general hospitals have assumed an increasing share of psychiatric care it is not possible to determine their relative effectiveness from existing national statistics.

The concept of patient movement is presented in Chapter 5. Marked changes have occurred in the number and ratio of admission and separation events in



Canadian institutions but it is difficult to determine their relationships. In proportion to population first admissions doubled, readmission-events increased five times, discharges quadrupled, and patients in residence increased one-sixth between 1932 and 1960. Between 1955 and 1960 the average daily population in mental hospitals decreased 10 per cent, and those in institutions for the mentally retarded increased 12 per cent.

Chapter 6 deals with admissions to psychiatric institutions. Lack of provincial agreement on definition of first admissions is evident. The available tabulations do not permit adequate assessment of the factors involved in wide provincial differences in admission rates. More specific tabulations are required. Marked increases in the number of readmission-events have occurred, both in terms of the number of events per individual as well as the number of individuals being readmitted. Better tabulation of existing data on readmissions is necessary, as well as the development of longitudinal studies of first admissions in order to establish the relations between the rate of return, the number of readmission-events, and the total amount of hospital care used over a period of time.

Separations are discussed in Chapter 7. During 1956-1960 nearly one-half of all separations with more than one year of hospital care were deaths, and the 19,625 patients who died had spent 70 per cent more time in hospital than had the 150,070 discharges. Unsatisfactory indices of duration of stay continue to be used by the Dominion Bureau of Statistics and should be replaced with actuarial indices.

Patients in psychiatric institutions are considered in Chapter 8. Marked provincial differences have occurred in the direction and extent of change in the ratio of patients in institutions between 1932 and 1960. The ratio for mental retardation doubled while that for psychoses increased 13 per cent. At the end of 1960 four out of 1,000 Canadians were under the care of psychiatric institutions. This ranged from 0.1 per cent of children to 1.1 per cent of those over the age of 65. One-half of all patients had been hospitalized for more than seven years. Current tabulations are restricted by the data available and the analyses employed; both the data and analyses can be improved.

The problem of long-stay patients is presented in Chapter 9. At the end of 1960 three out of 1,000 Canadians had been under hospital care for more than two years. For these 52,532 patients, separation by death was more likely than discharge.

Chapter 10 describes various methods of assessing the retention of patients, which should be used by the Dominion Bureau of Statistics. One-half the patients in psychiatric institutions at the end of 1950 remained under continuous hospital care until the end of 1960; in seven provinces this ratio was between 53 and 54 per cent. Of the 67,525 patients on books of institutions at the end of 1955, five-eighths remained under continuous care, at least one-eighth died, and less than one-fourth had left by the end of 1960. An estimated \$283 million was spent on the 42,660 patients under continuous hospital care between 1955 and 1960; three-fifths of mental hospital expenditures were for this continuously hospitalized group. The absolute number of mental hospital patients retained two to three years was 8 per cent lower for admissions during 1958 than for admissions during 1953. One-third of admissions during 1956-1960 are estimated



to have remained hospitalized for more than four months, and one-third of patients hospitalized four months would remain continuously hospitalized for ten years. Inter-provincial differences were more marked in the early months, and decreased with increasing lengths of stay.

National data on personnel, finances, and out-patient clinics are surveyed in Chapter 11. These tabulations are considered unsuitable for the reliable comparison of differences in time, or between provinces or types of institution. It is unlikely that the additional 2,062 qualified psychiatrists needed for a realistic satisfaction of Canada's need by 1971 can be achieved without marked expansion of university training programmes or considerable change in the migration of psychiatrists into and out of Canada. In 1962 there were more Canadian-born graduates of Canadian medical schools specializing in psychiatry in the United States than were on the staffs of all Canadian psychiatric institutions.

### *Hospital Care in Selected Provinces*

Part III deals with analyses of Ontario data, and longitudinal studies of patients in British Columbia and Saskatchewan which were performed by Dominion Bureau of Statistics at the request of the Royal Commission on Health Services.

Chapter 12 reviews the comprehensive descriptions of Ontario mental health services prepared by the Medical Statistics Branch of the Ontario Department of Health. National trends are corroborated in the Ontario data. Considerable changes have occurred in the age and diagnostic characteristics of patients in residence, with the proportion of patients under 15 or over 65 doubling between 1941 and 1960, and mental retardation forming an increasing proportion of institutionalized patients. Over one-fifth of the patients in Ontario public mental hospitals at the end of 1960 were considered to be receiving residential accommodation only rather than hospital treatment and were therefore transferred to residential accommodation by the end of 1963.

First admission rates for unduplicated patients in British Columbia and Saskatchewan during 1958-60 are described in Chapter 13. About one-fifth of one per cent of the population aged 15-64, and one-half of one per cent of the aged were first admissions. It is projected that about one out of eight infants would be hospitalized in a psychiatric institution at some time in their lives, on the basis of these first admission rates.

Discharge and readmission rates for the same sample of first admissions are given in Chapter 14. One-third of admissions were discharged within one month, and three-fourths within four months; relatively few discharges occurred between four and twelve months. Functional psychoses had higher discharge rates than did all diagnoses combined. Death rates were highest for non-functional psychoses, about one-third of psychoses of senium dying in hospital within one year. Readmission of about one-fifth of discharges occurred within one year. Patients discharged from psychiatric units of general hospitals did not have higher readmission rates than those discharged from other institutions.

The aggregate hospital care used by Saskatchewan admissions within one and two years following admission is analyzed in Chapter 15. During the first year after admission an average of 100 hospital-days were used per patient.

Continuous hospitalization was incurred by 14 per cent of the patients who used one-half of the hospital-days. By the end of two years an average of 173 days had been used per patient, 90 days for patients with functional psychoses, and 330 days for patients with non-functional psychoses. Three-fifths of the aggregate hospital stay had been used by one-seventh of the patients who had been continuously hospitalized with mental retardation or non-functional psychoses. Admissions with functional psychoses to general hospitals used 54 days per patient while those admitted to mental hospital used 111 days during the first year; none of the general hospital patients were hospitalized, while 15 per cent of the mental hospital admissions were in hospital at the end of the first year. Psychiatric divisions of general hospitals can treat the great majority of patients needing hospitalization.

#### *Psychiatric Care and Prepaid Medical Insurance Plans*

Part IV describes insurance provision for psychiatric care in Canada at the end of 1962, and the actuarial experience of some insurance plans providing enhanced coverage.

In Chapter 16 the wide-spread and major differences in the extent, duration, and amount of psychiatrists' care provided by members of Trans-Canada Medical Plans are described. Only one of nine plans provided coverage for all psychiatric services.

The experience of Medical Services Association, Vancouver, is analyzed in Chapter 17. The over-all frequency of psychiatric consultation, requested by physicians, was 0.4 per cent in 1957. For the two calendar years prior to psychiatric consultation the insurance plan expenditures for the families of patients, and for the patients themselves, were higher than those for other members. Three to four years after psychiatric consultation the expenditures for the families of patients were not significantly different from controls. The occupational stability of patients, and the employed spouses of patients, was lower than for controls. In a group of patients eligible for 60-75 hours of psychotherapy over a four- to five-year period, one-sixth were not seen after consultation; the average amount used was less than ten hours. Three-fifths of patients referred to psychiatrists were seen for less than six months.

Three other Canadian insurance plans are described in Chapter 18. Data provided by Credit Union and Cooperative Health Services Society, Vancouver, demonstrated the above-average medical costs during the two years before psychiatric consultation for married women seeing psychiatrists. These increased costs were for hospitalization, and laboratory and radiology examinations. Nearly one-half of the women had been given definite diagnoses of psychiatric illnesses or symptoms some time preceding referral; the median interval for such diagnosis was 23 months.

The same chapter includes the results of Medical Services (Alberta) Inc., Edmonton, which had progressively reduced restrictions on psychiatric care between 1958 and 1962. Payment was made for consultation, in-patient care, and psychotherapy of up to \$1,000 per year. The annual rate of initial consultation, including self-referrals, was 0.8 per cent in 1962. At least 1.1 per cent of adult males and 1.6 per cent of adult females attended a psychiatrist during 1961-62. Forty hours of private psychiatrists' time were used per 1,000 members, and it is projected that future use could reach 200 hours per 1,000 member-years. In the third insurance plan, for employees of the Public Service of Canada, maximum

expenditures of \$10,000 per illness were possible and less than 2 per cent of the costs were for psychiatrists. Payment for treatment of psychiatric illnesses has not resulted in disproportionate costs in the insurance plans studied. Provision for psychiatric treatment must be considered, not only on the basis of need but on the basis of the expensive, ineffective over-utilization of medical, hospital, laboratory, and pharmaceutical services which represent a masked cost of psychiatric disability.

Chapter 19 reviews data on the case-loads of psychiatrists in private practice. Although there is considerable variation among individuals, psychiatrists generally have a considerable case-load which includes an average of 200 consultations annually.

### *The Extent of Psychiatric Morbidity and Care*

Part V deals with studies of the extent of psychiatric care in two communities with above-average concentrations of psychiatric facilities; discusses manifestations of psychiatric morbidity other than the use of psychiatrists' care; and estimates of Canada's needs for hospital care.

Chapter 20 presents various indices of psychiatric morbidity in the Canadian population. Family physicians record diagnoses of psychiatric illness in 2 to 4 per cent of the population annually; in one study this reached 14 to 25 per cent over a five-year period. On the basis of a prescription survey it is estimated that for every patient recorded as having a psychiatric illness there are twice as many for whom psychiatric illness is recognized but not recorded. The contribution of psychiatric illnesses to sick leave, total disability, and the high rates of suicide, criminal narcotic addiction, and alcohol consumption are discussed.

The extent of psychiatrists' care in Moose Jaw and London, Ont., is given in Chapter 21. Over 1.5 per cent of the total population received clinic or in-patient treatment during 1958-1960. This proportion was lowest among children and highest among the aged. The bulk of in-patient care for Moose Jaw admissions was provided by less than 0.4 beds per 1,000 population.

National requirements for hospital care are estimated in Chapter 22 on the basis of recent and projected reduction in mental hospital use. From the experience for Saskatchewan it is estimated that in-patient needs for admissions (excluding mental retardation) average 200 days per 1,000 population, and that this could be further reduced with expanded community mental health services.

### **The Quality of Psychiatric Care in Canada**

"By every standard of measurement the problems of mental ill-health loom large and demand remedial action. The mental health services available to Canadians are inadequate in most respects and, with a few notable exceptions, are based on standards which were designed to fit the concepts of an age which has passed. New knowledge and effective methods of prevention, diagnosis, treatment and rehabilitation are available but they have not been widely applied and it is possible to say that the management of mental and emotional disturbances lags behind the advances of medicine."<sup>54</sup>

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<sup>54</sup> Canadian Medical Association, brief submitted to the Royal Commission on Health Services, Toronto, May 1962, para. 40.



The quality of psychiatric care is related to the degree to which it is available, acceptable, comprehensive, continuous, and has treatment based on diagnosis rather than symptoms.<sup>55</sup> In terms of these five criteria the general quality of psychiatric care is not high in Canada.

### *Availability*

There are major geographic variations in the availability of psychiatric care in hospital, and in the community. The majority of members of prepaid medical insurance plans are restricted as to the type and amount of psychiatrists' care for which they are eligible. Submissions to the Royal Commission on Health Services from organizations in all provinces referred to the delays involved in obtaining psychiatric consultation from private psychiatrists or public clinics.<sup>56</sup>

### *Acceptability*

Less than one-fifth of first admissions to mental hospitals were admitted on a voluntary basis.<sup>57</sup>

### *Treatment Based on Diagnosis and not Symptoms*

It is evident that patients with psychiatric illnesses are frequently handled on a symptomatic basis and that there is insufficient provision by prepaid medical insurance plans for alternative methods of care by family physicians.

### *Comprehensive Range of Services*

The majority of hospitalized patients remain in isolated mental hospitals. Few Canadian communities provide a comprehensive spectrum of services for a patient through all stages of his illness, or for various types of psychiatric disability.

### *Continuity of Care*

This is limited by the deficiencies in geographical and financial availability, and the lack of comprehensive services.

## **Needs for Psychiatric Services**

Programmes for psychiatric care should be developed on the basis of existing needs and current concepts. Expansion of the present system of mental hospitals will be expensive and futile because the system is obsolete and harmful. Psychiatric treatment should be fully integrated with medicine, and priority given to the development of comprehensive community services, so

<sup>55</sup>Dearing, W. P., Quality of medical care, *Calif. Med.* 98:331-335, 1963.

<sup>56</sup>The waiting period for out-patient consultation is a major indicator of the availability of medical services.

"As for how medical needs in a community are being satisfied by the existing facilities, even the average waiting period for admission is not the most useful guide. From everybody's point of view the really important factor is the waiting period for outpatient consultation—the sooner the consultant can see the patient the greater the possibilities of varying the pattern of treatment; it may still be possible to deal with the case without in-patient care. In many cases a long period of waiting for consultation makes in-patient admission inevitable."

Forsyth, G., and Logan, R.F.L., *The Demand for Medical Care*, published for the Nuffield Provincial Hospitals Trust by the Oxford University Press, 1960.

<sup>57</sup>"...Future legislation should encourage the development of mental health services, rather than hospitalization of the unwilling patient; if services improved, the occasions for compulsion would be fewer." World Health Organization, *WHO and Mental Health 1949-1961*, Geneva: The Organization, 1962.



integrated. Hospital and ambulant care should be provided in a manner equivalent to that for any other types of illness. In-patient services should be centred about psychiatric divisions of general hospitals and related to psychiatrists in clinics or private practice. Preventive activities should be emphasized,<sup>58</sup> as well as the training of family physicians in the early recognition and appropriate treatment of psychiatric disorders. The population of long-stay patients retained in institutions require review of their treatment needs, the application of existing methods of rehabilitation, and the development of new approaches of care.

Evaluation of all aspects of psychiatric services is essential. Personnel trained in the development and application of appropriate methods of evaluation are needed at various local, provincial, and national levels of organization. All requests for financing psychiatric services should be accompanied by clear statements of their objectives and criteria by which their effectiveness and efficiency might be assessed. Evaluation should be regarded as an integral feature of any new or continuing programme but should be provided by impartial persons or groups separate from those involved in service. Application of the findings of such evaluation is essential and would serve as one criterion of the effectiveness of the evaluation process itself.

In addition, a national non-governmental agency is required which should be concerned with evaluation relating to any aspect of health services, including the mental health services. This national non-partisan agency should be so organized that it has adequate financial continuity, can provide and publish objective statements and is not subject to particular professional or governmental bias. Its functions should include not only development and application of methods, but also consultation and direction of specific studies. Personnel and activities should represent suitable, diverse disciplines, whose services should be available to all levels of government, agencies and organizations. There should be adequate provision for utilizing and retaining the services of both full- and part-time personnel.

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<sup>58</sup> See Appendix 1-6.



PART II

NATIONAL STATISTICS ON PSYCHIATRIC CARE





## THE ROLE OF DOMINION BUREAU OF STATISTICS

"Few persons, I believe, who are practically acquainted with the subject, are quite satisfied with the present methods of reporting the results of management in hospitals for the insane, or are prepared to yield entire confidence in the general conclusions to which they lead. Certainly the wish has often been expressed that greater uniformity were observed in those methods, and that certain conditions and events connected with the subject, were more accurately defined. General rules and principles that are fairly drawn from observations, have always been regarded as preeminently safe, and this strict by-induction method of inquiring is now universally considered as the most effectual means of arriving at the truth. It would seem as if results like these could not be otherwise than correct, because they are but the general expression of the facts themselves. It is this very appearance of certainty which sometimes, as in the present case, blends into the actual fallacy, and we go on accumulating and hugging our treasures of knowledge as we fancy them, until we find at last that we have been ingeniously deceiving ourselves with an empty show, while the substance has completely escaped us.

"It is a simple thing, no doubt, to add, and subtract, and divide columns of figures which patient industry alone was needed to collect. But statistics implies something more than a process in arithmetic. It is a profound, philosophical analysis of materials carefully and copiously collected, and chosen with an enlightened confidence in their fitness for the purpose in question."<sup>1</sup>

### Introduction

Various aspects of the national statistics on psychiatric care prepared by Dominion Bureau of Statistics are described in Part II. In addition to analyses of the statistics which are available, close scrutiny is made of areas and problems for which additional types of data and analysis are essential. The present and possible functions of Dominion Bureau of Statistics are discussed in this chapter.

### Historical Development of Canadian Statistics

Statistics on mental illness in Canada have been published for many years. In the 1851-52 *Census of the Canadas* Sir John Sinclair's definition of statistics is quoted:<sup>2</sup>

"...an enquiry into the state of a Country, for the purpose of ascertaining the quantum of happiness enjoyed by its inhabitants, and the means of its future improvement".

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<sup>1</sup>Ray, I., The statistics of insane hospitals, *Am. J. Insan.* 6:23-52, 1849, reprinted in *Ment. Hosps.* 6(5):5-6, 1955.

<sup>2</sup>Canada, Board of Registration and Statistics, *First Report of the Secretary of the Board of Registration and Statistics on the Census of the Canadas for 1851-52*, Quebec: John Lovell, 1853, p. XXXIX.

Specific reference was made to statistics on

"...Diseases, Deafness, Blindness, Lunacy, Death and its causes; all these in their varied phases and their varied influence upon society and self, open a wide field for scientific enquiry and valuable inferences to conduce to the increased knowledge and amelioration of mankind".

This 1851-52 Census contained tabulations of the residence, number, and sex of "lunatics" in the general population as well as lists of the demographic characteristics for individual patients in the Asylums at Toronto and Quebec.<sup>3</sup> The "nature of the malady" and "supposed cause of insanity" were listed for the Toronto patients, e.g., "seduction", "intemperance", "religion", "political trouble", "fall from a horse". The Quebec physicians were more circumspect and noted that the nature of the malady was extremely various even in the same individual at different times, and that some of the idiotic "have become so from long continued confinement".

TABLE 2-1  
NUMBER OF "LUNATICS", UPPER AND LOWER CANADA, 1851-52

	Upper Canada		Lower Canada	
	Males	Females	Males	Females
Total population (thousands) .....	499	453	450	440
Total number of "lunatics" .....	519	550	891	842
Number in asylum .....	150	138	80	73
Number outside asylum .....	369	412	811	769

Source: Census of the Canadas, 1851-52, *op. cit.*

The ratio of hospitalized patients was higher in Upper Canada than Lower Canada. In Upper Canada, the rate for the population aged 20-59 was 67 per 100,000 for males and 72 per 100,000 for females. On the other hand, a higher number and ratio of non-hospitalized "lunatics" were reported from Lower Canada.

One hundred years previously, there were more patients entering than leaving mental hospitals.

TABLE 2-2  
TABULAR STATEMENT OF THE NUMBER OF PERSONS  
ADMITTED INTO, DISCHARGED FROM, AND REMAINING IN,  
THE LUNATIC ASYLUMS OF EACH OF THE UNDERMENTIONED  
COLONIES IN 1863

	Canada	Nova Scotia	New Brunswick	Prince Edward Island
Admitted .....	379	47	55	8
Discharged .....	246	35	95	9
Remaining .....	1,380	142	186	21

Source: Monro, A., *History, Geography, and Statistics of British North America*, Montreal: John Lovell, 1964, p. 300.

<sup>3</sup>This 1851-52 Census precedes the 1871 Census to which Dominion Bureau of Statistics has attributed the first Canadian Census study regarding the insane and feeble-minded. Dominion Bureau of Statistics, *Census of Canada, 1931*, Vol. IX, Ottawa: King's Printer, 1935, p. 113.

National Censuses between 1871 and 1921 continued to enumerate the "insane and feeble-minded" in Canada.<sup>4</sup> In 1931 a detailed census of mental institutions was undertaken with the objective of providing information which would assist administrative decisions.

"The purpose of the census for institutions is not merely to ascertain the number of men, women and children committed to institutions but to obtain facts regarding the characteristics of the inmates, causes of commitment and such other information as is necessary for an analysis of the social problems involved—the whole as indicating practical means of reducing the number of inmates and of promoting efficiency and economy in management."<sup>5</sup>

In 1932, this system was placed on an annual basis.

"The Bureau undertook to publish an annual report on the mental institutions operating in Canada, based on data compiled from two types of return—a schedule completed and submitted yearly by each institution and an individual reporting card on each patient, prepared at the time of admission, transfer, discharge or death.

"Few changes have since been made in the basic methods of collecting the source data, although improvements have been introduced from time to time in simplifying the reporting documents, eliminating unnecessary questions, extending the coverage, and consolidating the liaison with provincial health departments and institutions. In recent years supplementary schedules have been designed for mental health clinics and out-patient services, and the individual card system has been broadened to include psychiatric units in general hospitals.<sup>6,7</sup>

In 1952, the Dominion Bureau of Statistics began to collate the various reports of admissions and separations to produce a census of patients remaining on books of institutions at the end of the year. By 1959, information for patients under care at the end of 1955 had been transferred to punch-cards. For 1955 and subsequent years annual reports on *Patients in Institutions* were published as a supplement to the data on patient movement contained in *Mental Health Statistics*.

### **Responsibility and Objectives for a National System of Statistics on Mental Illness**

The responsibility and methods for collecting national statistics were described by the Dominion Bureau of Statistics in this manner.<sup>8</sup>

"Canada's 'Constitution' the British North America Act, allocates responsibility for 'the census and statistics' to the federal government in setting out the division of governmental jurisdiction between the Dominion and the Provinces.

"In the field of health, including the special area of mental illness the events and situations being measured are in the main the constitutional concern of the 10 provincial governments rather than of the federal government. Accordingly, the source data are collected and compiled within the frame work of working arrangements between the Bureau and Provincial Health Departments."

<sup>4</sup>Dominion Bureau of Statistics, *Census of Canada, 1931*, *ibid*.

<sup>5</sup>*Ibid.*, Vol. IX, p. XXIII.

<sup>6</sup>Dominion Bureau of Statistics, Health and Welfare Division, *Mental Statistics Handbook*, 2nd edition, Ottawa: Queen's Printer, 1954, p. 7.

<sup>7</sup>Copies of the schedules and morbidity cards employed in 1954 are found in Appendices 2-1 to 2-4.

<sup>8</sup>Dominion Bureau of Statistics, *Mental Statistics Handbook*, 2nd Edition, *op. cit.*, p. 7.



The purpose of this national system was to make available reliable statistical information on four main aspects of mental illness:<sup>9</sup>

- the amount, nature and utilization of hospital accommodation and facilities available for treatment of the mentally ill,
- the operating costs, revenues and financial condition of mental hospitals,
- the incidence and nature of hospitalized mental illness and the characteristics of patients,
- the nature, duration and results of hospital treatment.

The statistical system was described as being "tuned to current needs". Although it was emphasized that the contents of reporting forms were predominantly determined by "the requirements of consumers of the data, primarily professional health personnel concerned with various aspects of mental illness"<sup>10</sup> expediency produced some compromises.

"The requirement factor must, however, be influenced strongly by expediency. The answers to many questions which might be asked are either not available or would be subject to considerable bias and must therefore be excluded in the interests of limiting the returns to data which can be expected to be provided with reasonable completeness and accuracy. . . . The net result sought is this compromise between these factors, worded and arranged so as to cause a minimum of inconvenience in completion while affording maximum facility for tabulation."<sup>11</sup>

The Dominion Bureau of Statistics recognized that reliable statistics were indispensable for planning bed accommodation, for providing specialized treatment services, for sound hospital administration and financing, for initiation of preventive measures and for a wide range of similar practical problems.<sup>12</sup> It was stated that "Canada now takes second place to no other country in the comprehensiveness and reliability of its mental health statistics".<sup>13</sup>

### Extent to which Objectives of Dominion Bureau of Statistics are Attained

Between 1932 and 1960 the nature and extent of psychiatric services changed. The current publications by Dominion Bureau of Statistics are insufficiently tuned to providing the information necessary for planning bed accommodation, for providing specialized treatment services or for initiating preventive measures.

Although the statistics may be comprehensive, they do not provide sufficient information for research, evaluation or planning.<sup>14</sup> Many of the tabulations are not appropriate for historical comparisons because of changes in the composition and extent of reporting institutions, changes in the characteristics of patients, and variations in the definition of first admission. It is not feasible to

<sup>9</sup> *Ibid.*, p. 8.

<sup>10</sup> *Ibid.*

<sup>11</sup> *Ibid.*, p. 9.

<sup>12</sup> *Ibid.*, p. 10.

<sup>13</sup> *Idem.*

<sup>14</sup> The reliability of a number is different than the validity of the index. With the 1953 *Mental Health Statistics*, a note was distributed stating "Due to a clerical error not discovered before printing, readmissions in Alberta have been overstated by one patient in Table 47. This error affects such figures as total admissions, etc., for Alberta and Canada in several other tables, but has no significant effect on any rates."

Despite correction, the index still did not adequately reflect the number of admissions who had been previously hospitalized, due to wide variation in the definition of first admission.



evaluate the nature, duration and results of hospital treatment for homogeneous groups of patients, or to determine their longitudinal history through subsequent hospitalizations.

In subsequent chapters considerable attention is directed towards defects in current national statistics.<sup>15</sup> In some areas, an attempt has been made to propose alternatives. It is hoped that the proposed alternatives are not equivalent to picking the pocket of one knocked down by an automobile, as described by Mencken.<sup>16</sup>

### Analysis and Interpretation of Statistics on Mental Illness

"Collecting statistics is like collecting garbage and night-soil; once collected something must be done with them."<sup>17</sup>

Although there is considerable current interest in the analysis of statistics on mental illness, descriptions of many of the methods and principles of statistical analysis had been published in the previous century.<sup>18-19</sup> It is necessary to apply these methods of analysis, or to supply the basic tabulations upon which these analyses may be made. Either of these ends are achieved by appropriate collaboration among the groups:<sup>20</sup>

- supplying the basic data,
- tabulating and analysing the data,
- utilizing the information<sup>21</sup> for the study, evaluation and planning of psychiatric services.

The collection, tabulation, analysis and interpretation of statistics on mental illness should adhere to the following criteria proposed for service statistics in public health:<sup>22</sup>

- should be not only useful but actually used,
- should be valid,
- should be significant for the purpose it is supposed to serve,
- should be readily available,
- should justify the time and expense involved in its collection.

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<sup>15</sup> "It is frequently easy to exhibit some figures which, though not really to the point, will nevertheless serve to impress an uncritical public, and the temptation may be great to give them, at least by implication, an unduly favourable interpretation. It is more difficult and more tedious to present the full argument, based on all the facts, and it is perhaps a little humiliating to admit that the statistical evidence is deficient because we have failed to collect it; but to do this is not only more scientific, it is in the end more convincing, and after all there is no free choice, because it is the only *honest* method, whether it be convenient or not. Finally, it is the only way of progress, for the first step towards collecting better evidence is to recognize the deficiencies of that which is at hand." Frost, W. H., *Rendering account in public health*, *Am. J. publ. Hlth.* 15:394-398, 1925.

<sup>16</sup> Mencken, H. L., *The cult of hope*, in *Prejudices—Selection made by James T. Farrell and with an introduction by him*, New York: Vintage Books, 1959, pp. 84-85.

<sup>17</sup> Aphorism.

<sup>18</sup> Farr, W., *Report upon the mortality of lunatics*, *Jl. R. statist. Soc.* 4:17-33, 1841.

<sup>19</sup> Thurnam, J., *Observations and Essays on the Statistics of Insanity; to which are added the Statistics of the Retreat, near York*, London: Gilpin and Hutton, 1845.

<sup>20</sup> Within each of these three groups different types of organization, profession, and interest are encompassed.

<sup>21</sup> Data becomes information through the processes of analysis and interpretation.

<sup>22</sup> Report of the Working Group on Service Programmes, *Publ. Hlth. Rep.*, Wash. 71:521-524, 1956.

In order to fulfil the above criteria much further collaboration is required among the various levels of organization involved, the diverse professions concerned, and the individuals or organizations interested in using the material. It is essential that appropriate analyses and interpretations accompany the published data. This requires personnel highly skilled in the area of mental health statistics.

"Analysts using statistics must be familiar with sources, definitions, and methods of collection in order to use and interpret the data intelligently. By the same token, in order to provide meaningful statistics which are appropriately reliable to serve the purpose for which they are intended, the statistician must have a thorough understanding of the uses made of the statistics which he produces. Unless those who collect and prepare the statistics understand how the data are used, there are dangers that the statistical series will degenerate into meaningless numbers or be refined to an unnecessary degree of accuracy.

"Participation by people familiar with the details of collection in the analysis and interpretation of the data is the best way to avoid this. Resources of statistical agencies should be sufficient to provide some staff, close to but not completely preoccupied with operations, who would be able to evaluate and analyse the data and to plan and adapt survey procedures in keeping with uses of the data."<sup>23</sup>

### **Training, Employment, and Retention of Statisticians at the National Level**

It is recognized that experience with the data in a given field is essential in order to avoid perils of statistically valid, but substantively meaningless analyses.<sup>24</sup> The individual responsible for supervising continuing programmes for the collection, compilation, analysis and interpretation of national records in the area of mental illness should have an advanced degree in Public Health Statistics, appropriate experience, and demonstrated record of professional achievement. In addition, the individual supervising a programme in mental health statistics should have a sufficient number of personnel who have received field training carefully planned and supervised and under the joint sponsorship of an academic institution and a health agency.<sup>25</sup>

Increased encouragement and financial assistance are required for the training, employment and retention of such personnel in Canada. During the first 13 years of the National Health Grants Programme, 7 bursaries were supplied through the Professional Training Grant for statisticians,<sup>26</sup> and 24 attendances at short courses.<sup>27</sup> During the year ending June 1962, 24 biostatisticians were graduated from all Schools of Public Health in the U.S. and Canada. No Canadian statisticians were recorded as graduating.<sup>28</sup>

Suitable personnel should be assured of career opportunities within the area of mental health statistics, so that it is not necessary to enter another area of

<sup>23</sup>United States Office of Statistical Standards, Bureau of the Budget, *A Federal Statistics Program for the 1960's*: a study prepared for the Sub-Committee on Economic Statistics of the Joint Economic Committee, Congress of the United States, October 15, 1962, Washington: United States Government Printing Office, 1962, p. 69.

<sup>24</sup>American Public Health Association, Committee on Professional Education in the Health Services, Educational qualifications of statisticians, *Am. J. publ. Hlth.* 53:88-96, 1963.

<sup>25</sup>*Ibid.*

<sup>26</sup>This refers to statisticians in any health field.

<sup>27</sup>Department of National Health and Welfare, *National Health Grants, 1948-1961*, op. cit., p. 23.

<sup>28</sup>Troupin, J. L. *Schools of Public Health in the United States and Canada*, for the year ending June 1962, dupl., New York: American Public Health Association, Inc., p. 23.

health statistics (or to leave Canada) in order to reap the rewards of increasing professional competence. Opportunities for extensive consultation with other professionals in the area of psychiatric statistics and association with community and provincial programmes are required for the statistician to become attuned with the needs of users.

### Essentials for a National Statistical System

A national statistical system should provide comprehensive, reliable and valid information for various types of psychiatric patients, institutions and services. The information system must yield useful comparisons between different types of institutions, between provinces, and indicate historical trends. National statistics cannot be more reliable, valid, or useful than the data supplied by the source.

Although there are considerable administrative and geographic difficulties in lines of communication it is necessary to strengthen statistical systems at community and provincial levels. Should this not be regarded as an appropriate function for the Dominion Bureau of Statistics, it must be undertaken by some other agency. With the advancement of local and provincial systems, the further improvement and extension of a national statistical system can be continued by Dominion Bureau of Statistics. The criterion of the effectiveness of any revision in the system for national statistics on mental illness will be the *usefulness* of future statistical material.

Each of the provincial Mental Health Divisions publishes annual statistical reports, most of which are unsuitable for assessing the nature, extent and duration of psychiatric care. Active, continuous collaboration in the areas of objectives, standardized definitions, useful analyses, and the non-duplication of statistical compilations is required at provincial and national levels. In the establishment of basic definitions and minimum uniform tabulations, suppliers and users of statistical material other than provincial Mental Health Divisions should be involved.

Further co-operation between Dominion Bureau of Statistics and provincial Mental Health Divisions could enable the central preparation of comparable sets of tabulations to be used in the statistical reports of each province. In 1954, publication of national and provincial statistics within *six months* of the end of each year was described as an objective of both federal and provincial mental health authorities as well as the Bureau.<sup>29</sup> In view of the achievements in data processing over the past ten years this objective is now attainable. Statistical publications of national trends must be accompanied by appropriate analyses and interpretations, performed by Dominion Bureau of Statistics or some other suitable agency.

The development of such co-ordination is difficult but necessary. The purpose of the Advisory Committee on Mental Health has been described as improvement of the collection of mental health statistics and the facilitation of co-operation between federal, provincial, and other organizations.<sup>30</sup> It would

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<sup>29</sup>Dominion Bureau of Statistics, *Mental Statistics Handbook*, 2nd edition, *op. cit.*, p. 10.

<sup>30</sup>Taylor, K. W., Co-ordination in administration, in Hodgetts, J. E. and Corbett, D. C. (Editors), *Canadian Public Administration*, Toronto: The Macmillan Company, 1960, pp. 145-164.



seem essential for the Advisory Committee on Mental Health to give high priority to the development of the highest standard of national statistics on psychiatric care.<sup>31</sup>

### National Significance of Local Studies

In addition to extensive studies of national or provincial problems more intensive studies of local regions or specific questions are required. These studies should be designed and undertaken in collaboration by Dominion Bureau of Statistics and appropriate professionals. With suitable co-ordination these central and peripheral programmes can effectively reinforce one another, without duplication.

The need for complementary central and community statistical activities in the United States has been emphasized by Kramer.<sup>32</sup> The data being collected at the national level are considered most useful in providing gross indicators of successes as well as failures in control and preventive programmes, of technics of uncertain value that need further evaluation, major problems that have to be attacked in different geographic sections of the country and in various sub-groups of the population, and some basis for anticipating future needs for personnel and services. Other types of statistical programmes are needed to solve problems resulting from the health, social, educational, economic, and cultural characteristics of particular communities and evaluation of the programme activities of local agencies. Such intensive studies can provide facts and knowledge helpful not only locally but to those who, at the central level, are attempting to gain a better understanding of the consequences of various mental health activities throughout the nation.

### Need for Longitudinal Studies

The need for longitudinal studies of the nature and duration of illness and the results of care was recognized over 100 years ago:

"Yet what we require from a correct system of asylum statistics may be readily stated. We seek the numerical history of each 100 cases of insanity traced from the day when the disease first shewed itself, to its resolution in recovery or death. We want to know . . . its history, progress, with the influence of age, sex, occupation, social relations on the incubation, progress and result of the disease. We want, in fact, scientific, statistical record of the entrance, life and death of every inmate, which, at the end of each year may then, from the several reports be amassed and grouped into figures, uniform and accurate, pregnant with information of the history of mental disease."<sup>33</sup>

Current advances in psychiatric care are associated with increased movement of patients between institutions and the community. Longitudinal studies

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<sup>31</sup>The duties of the Advisory Committee on Mental Health were originally stated as: "... shall facilitate co-operation between the Mental Health Division and the provincial mental health services with a view to the exchange of information, the co-ordination of effort and activities in order to insure the existence and maintenance of the highest standard of mental health services and procedures".

Order in Council P.C., 118/3465 dated August 27, 1947, cited in Department of National Health and Welfare, *Mental Health Services in Canada*, op. cit., p. 36.

<sup>32</sup>Kramer, M., et al., National approach to the evaluation of community mental health programs, *Am. J. publ. Hlth.* 51:969-979, 1961.

<sup>33</sup>Robertson, C. L., Suggestions towards a uniform system of asylum statistics, with tabular forms, *J. ment. Sci.* 7:195-211, 1861.



of individual patients are needed to describe and evaluate this history of hospital care. Such longitudinal studies for British Columbia and Saskatchewan are described in Part III and are feasible on a protracted basis.<sup>34</sup> The development and expansion of continuing programmes for longitudinal studies on local and provincial levels is required in Canada.

## Conclusions

(i) Statistics on mental illnesses are essential for the evaluation and planning of present and future psychiatric services as well as for research. Any national system of statistics is affected by the quality of the data provided, the usefulness of the tabulations produced, the nature of the accompanying interpretations, and the time-lag before publication. These factors will determine the extent to which the statistics may actually be employed in evaluation and programme planning.

(ii) The present system of Dominion Bureau of Statistics does not fulfil these purposes. Major revision of the system is required to provide reliable, valid and useful statistics. Pertinent analyses and interpretations of national statistics on mental illness are deficient, and must be provided in future by Dominion Bureau of Statistics or some other suitable agency. The policies and practices regarding the training and retention of personnel dealing with mental health statistics should be revised and provision made for continuous, close consultation and collaboration with appropriate personnel in national and provincial Mental Health Divisions, universities, and other organizations.

(iii) In addition to increased collaboration between Dominion Bureau of Statistics and users and suppliers of statistics, there is need for co-operation in the development of appropriate studies of local areas, and longitudinal studies of patients.

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<sup>34</sup>The feasibility of larger longitudinal studies has been demonstrated for England and Wales.

Brooke, Eileen M., A Longitudinal study of patients first admitted to mental hospitals, *Proc. roy. Soc. Med.* 52:280-283, 1959.



## CHANGES IN PSYCHIATRIC CARE AND ACCOMMODATION, 1932-1960

### Introduction

This chapter is intended to outline some of the changes in size and occupancy of psychiatric institutions during the period 1932-1960. This brief review is designed to provide some background for the description of directions in which hospital care for psychiatric illnesses has taken and for the delineation of areas in which further information and evaluation are required.

During the period 1932-1960, marked changes occurred in the availability and results of psychiatric treatment and public attitudes toward psychiatric illness. Concomitantly there were also changes in the

- spectrum of illnesses admitted to hospital;<sup>1</sup>
- types of care available to groups of different socio-economic status;
- objectives of hospital admission, and hospital care, and the criteria for discharge;
- availability of alternatives to hospital care; and
- number and qualifications of personnel.

### Hospital Care in the 1930's

In the earlier years the provincially operated mental hospitals were the major site of care for psychiatric illnesses requiring treatment. The need for psychiatric resources outside mental hospitals was long-recognized for the treatment of "early cases", and after-care of former patients; as well as for prevention of mental illness and promotion of mental health.

Despite the recognition of such needs there were relatively few facilities for out-patient care. There were few psychiatric clinics, psychiatrists in private practice, or psychiatric consultants to health, education, welfare, and correction agencies in the community. Generally, mental institutions in the nineteen-thirties were: relatively large; not located in centres of population;<sup>2</sup> segregated from other types of health and social services, and supported at minimum cost. Within

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<sup>1</sup>Little is known of changes in the severity of symptoms or degree of disturbance; or changes in diagnostic usage.

<sup>2</sup>In 1931, 0.57 acres of land per patient were owned by mental institutions, and \$26 of garden produce were raised per patient. Dominion Bureau of Statistics, *Census of Canada, 1931*, Vol. IX. *op. cit.*, p. 191.

the institutions, knowledge of the effectiveness of the social environment in psychiatric care was not generally utilized.<sup>3</sup>

The hospital reports of the early nineteen-thirties persistently described problems in the:

- location and physical structure of the institution;
- retention of "devoted" staff;
- low ratios of personnel to patients;
- establishment and maintenance of minimum recreational and social activities for patients;
- isolation from the local community;
- provision of "routine" medical care;
- institution of early treatment prior to the stage of severe illness;
- prescription of adequate after-care for discharged patients;
- development of alternative resources for the "socially rejected and misfit";
- accumulation of "chronic" patients for whom mental hospital care was no longer essential, but for whom no other resources were available.

### Psychiatric Care in 1948

Psychiatric care in 1948 was described by the Department of National Health and Welfare in this manner:

"It would be shocking to hear a mental patient of 1948 speak to us from that time. The public regarded mental illness for the most part as a disgrace. The popular reaction was rejection of the mental patient, often isolating him to a far-away institution and then denying more than minimum responsibility for his plight.

"Community treatment was mostly unavailable. It was the day of the "snake pit" mental hospital—bars, locks, restraints, "herding" and all the rest.

"Prior to 1948 almost all treatment of severely ill psychiatric patients was conducted in provincial mental hospitals, often located in isolated areas. Patients were admitted by legal process and retained in locked wards. Because of under-staffing and overcrowding, the emphasis was on custody rather than therapy. Patients and their relatives used the hospital only as a last resort. Mental illness evoked feelings of shame and hopelessness in the families of the mentally ill; many were encouraged to forget the patient following his admission.

"Provisions for emergency treatment of incipient mental illness, acute psychosis, emotional disturbance and behaviour problems in children were almost completely lacking. There were few mental health clinics or psychiatric units in general hospitals, and the only day hospital in operation was at the Allan Memorial Institute of Psychiatry, Montreal.

"Under such conditions the difficulties and problems confronting health authorities were many. In the larger centers patients might receive out-patient treatment, but the concept of co-operation with agencies responsible for providing financial support and counselling to patients and their families had not been accepted. Therefore, treatment and welfare services often worked at cross purposes or were unaware of each other's activities.

"Hospital admission was achieved painfully, often through co-operation of the police. The patient then "disappeared", inasmuch as it was hard for agencies to obtain follow-up information.

"Upon his return to the community, the discharged patient often experienced considerable hardship since his vocational and social adjustment had received scant attention.

<sup>3</sup>Richman, A., and Abbey, Helen. Mental hospital results: Nineteenth and twentieth century comparisons in *Proceedings of Third World Congress of Psychiatry, Montreal 1961*, University of Toronto Press, 1963, pp. 763-768.



"Voluntary agencies, such as the Canadian Mental Health Association, were beginning to direct their efforts toward the improvement of physical plant and personnel in mental hospitals. Volunteer programmes for hospitalized patients were then virtually unknown and, even when available, were not always welcomed by the hospital.

"About this time the Department of Veterans Affairs established psychiatric units in its hospitals. These units were unlocked and staffed with trained personnel from the essential disciplines. There came to be a limit on the length of time a patient might remain before transfer to a provincial mental hospital; and there was available emergency and continuing treatment for acutely ill patients who might otherwise have been admitted to a mental hospital following a waiting period in the local jail.

"Not all provinces had specifically designated mental health divisions within their health departments, but most had a chief psychiatrist. Other specialties such as psychology, psychiatric nursing, social work and occupational therapy were rare at the provincial level.

"Services for the mentally retarded consisted mainly of provincial hospital training schools in some, but not all, provinces. These were overcrowded, understaffed and had long waiting lists. In the larger centers auxiliary classes for retarded children with an I.Q. of 50 or over were available but the child below an I.Q. of 50 received little training if he were at home.

"For the mentally ill child there were a few child guidance clinics but no residential treatment centers."<sup>4</sup>

## Standard Bed Capacity

### Definition

Standard bed capacity signifies the maximum number of patients which an institution "should" accommodate. Standards exist of the *minimum* amount of space required for patients receiving various types of care. This area includes space for both the bed and recreational needs of the patient. The current minimum requirement for patients receiving "continuous care" is 50 square feet in ward accommodation, or 80 square feet for single rooms; plus an additional 50 square feet of day room space.<sup>5</sup>

### Significance

Standard bed capacity denotes the maximum number of patients to be accommodated in an institution allocating minimum space. Between 1932 and 1960 there were variations in the area regarded as minimum, in criteria of building obsolescence, and in the method of estimating the area for patient accommodation—"corridor space does not count unless it is an integral part of the sleeping or day space".<sup>6</sup> Provincial and national data are also affected by the extent to which institutions report, and the conversion of other health facilities for psychiatric care.

The amount of accommodation provided is not necessarily related to the incidence of illness, frequency of admission or the duration of hospital care. Furthermore, bed capacity is not an index of the accommodation available for the admission or care of new patients, since the extent of overcrowding varies and institutions contain patients of various lengths of stay and therefore different potentials for discharge. Provinces with similar ratios of public mental hospital

<sup>4</sup> Department of National Health and Welfare, *National Health Grants, 1948-1961*, op. cit., pp. 134-135.

<sup>5</sup> Dominion Bureau of Statistics, *Mental Statistics Handbook*, 2nd edition, op. cit., p. 14. In the first edition (1954, p. 14) of the Handbook the "standard" was 100 square feet in single rooms.

<sup>6</sup> *Ibid.*

accommodation to population may differ in the distribution of the length of stay of hospitalized patients, and therefore in the ratio of potential accommodation for new admissions.

TABLE 3-1  
MENTAL HOSPITALS, BED CAPACITY AND PATIENTS ON BOOKS  
UNDER TWO YEARS, CANADA AND PROVINCES, DECEMBER 31, 1962

Province	Bed Capacity per 100,000 Population	Patients on Books under Two Years		
		Number	Ratio per 100,000 Population	Percentage of all Patients on Books of all Institutions
CANADA .....	265	17,914	100.2	30.5
Newfoundland.....	186	310	69.2	33.4
Prince Edward Island....	366	233	226.2	49.4
Nova Scotia .....	— <sup>1</sup>	636	87.4	59.7
New Brunswick.....	226	704	119.5	31.7
Quebec .....	335	6,162	119.8	30.0
Ontario .....	242	6,180	101.1	31.7
Manitoba.....	260	728	80.4	23.8
Saskatchewan.....	226	889	97.2	25.2
Alberta .....	226	992	76.8	31.6
British Columbia.....	180	1,080	67.4	25.9

<sup>1</sup>Incomplete reporting from county and municipal institutions.  
Source: Data derived from special tabulations provided by Dominion Bureau of Statistics, 1962.

Trends i- Standard Bed Capacity

Between 1932 and 1960 the reported bed capacity increased from 32,951 to 64,519.<sup>7</sup> In relation to the size of the population, this represented a change from 314 to 361 per 100,000 population. Additional accommodation for 1,653 patients in institutions not formally reporting to Dominion Bureau of Statistics increased the total bed capacity to 66,172 for 1960.<sup>8</sup>

The ratio of accommodation varied among the different provinces. With a national ratio of 372 beds per 100,000 population in 1960, the provinces ranged from 183 beds per 100,000 population in Newfoundland to 422 beds per 100,000 population in Alberta.<sup>9</sup>

Various discrepancies regarding bed capacity occur in the text of Dominion Bureau of Statistics publications. For 1960 there was a difference of 1,653 between the *total* bed capacity of 66,172<sup>10</sup> and the *reported* capacity of 64,519. This apparently represents the bed capacity of institutions not formally reporting to the Dominion Bureau of Statistics.

<sup>7</sup>Dominion Bureau of Statistics, *Mental Health Statistics*, 1960, *op. cit.*, p. 43.  
<sup>8</sup>*Ibid.*, p. 42.  
<sup>9</sup>The reason for variation of some 1960 ratios from those published by Dominion Bureau of Statistics is because of revised estimates of population for 1960. See Appendix 3-1.  
<sup>10</sup>Dominion Bureau of Statistics, *Mental Health Statistics*, 1960, *op. cit.*, p. 42.

TABLE 3-2  
REPORTED BED CAPACITY 1932,  
TOTAL BED CAPACITY 1960, NUMBER AND RATIO PER 100,000 POPULATION,  
ALL PSYCHIATRIC INSTITUTIONS, CANADA AND PROVINCES

	1932		1960	
	Reported Bed Capacity	Ratio per 100,000	Total Bed Capacity	Ratio per 100,000
CANADA .....	32,951	314	66,172	372
Newfoundland .....	—	—	838	183
Prince Edward Island .....	300	337	377	366
Nova Scotia .....	1,951	376	2,719	376
New Brunswick .....	900	217	1,394	232
Quebec .....	8,875	303	20,766	407
Ontario .....	11,666	336	21,679	356
Manitoba .....	2,249	319	3,562	396
Saskatchewan .....	2,450	265	3,191	351
Alberta .....	1,875	253	5,408	422
British Columbia .....	2,685	380	6,238	388

Source: Dominion Bureau of Statistics, *Mental Health Statistics*, 1960, Ottawa: Queen's Printer, 1962, pp. 42-43.

“The total psychiatric-bed capacity of institutions that did not report in any form was 1,118 . . .”<sup>11</sup> The text adds that non-reporting institutions with a bed capacity greater than nine are listed in the Directory of the Report. This Directory lists 30 institutions (of 10 or more beds) with a total bed capacity of 1,456 which “Did not report in any form for 1960.”<sup>12</sup>

Another discrepancy occurred for public mental hospitals in New Brunswick which were variously assigned a bed capacity of 1,331 on page 36, and 1,950 on page 152 of *Mental Health Statistics*, 1960.

Provincial Differences in Type of Accommodation, 1960

The type of in-patient accommodation varies considerably from province to province.<sup>13</sup> In some provinces the only facilities are public mental hospitals.

<sup>11</sup>*Ibid.*, p. 11.

<sup>12</sup>*Ibid.*, pp. 152-154.

<sup>13</sup>The responsibility for hospital services, other than marine hospitals, had been assigned to the provinces in the British North America Act, 1867, Sect. 92, ss 7: “...the establishment, maintenance and management of hospitals, asylums, charities and eleemosynary institutions in and for the provinces other than marine hospitals.” In 1906 federal control for all cases of leprosy in Canada was formulated by an Act concerning Leprosy.

Each province operates a mental hospital program. (In Quebec the public mental hospitals were operated by individual boards, but financed by the province, with the exception of an institution for mentally ill prisoners, *Mental Health Services in Canada*, p. 62.) These programs differ considerably in the amount expended. The 1960 per-capita expenditure on provincially operated institutions averaged \$6.52 per Canadian, and ranged from \$3.77 in Quebec to \$10.39 in Saskatchewan. The proportion of personal income spent on operating expenditures ranged from 0.3 per cent in Quebec to 0.7 per cent in Saskatchewan. (See Appendix 3-2A).

Marked provincial differences also occurred in the type of program assisted by National Health Grant funds. During 1948-1953, such expenditures on psychiatric services in general hospitals and community clinics ranged provincially from zero to 33.4 per cent; research from zero to 13.4 per cent; and training from 4.7 per cent to 32.5 per cent (See Appendix 3-2B). During the first six years of the Hospital Construction Grant, all provinces but Saskatchewan provided additional mental hospital accommodation, while five provinces provided psychiatric beds in general hospitals (See Appendix 3-2C).

TABLE 3-3  
BED CAPACITY<sup>1</sup> BY TYPE OF PUBLIC<sup>2</sup> PSYCHIATRIC INSTITUTION, NUMBER AND RATIO PER 100,000 POPULATION,  
CANADA AND PROVINCES, 1960

Province	Mental Hospitals		Psychiatric Hospitals		Hospitals for Mentally Retarded		Homes for the Aged and Senile		Epilepsy Hospitals		Psychiatric Units		Unit for Disturbed Children	
	No.	Ratio	No.	Ratio	No.	Ratio	No.	Ratio	No.	Ratio	General Hospital	Tuberculosis Sanitarium	No.	Ratio
CANADA.....	47,313	264.7	653	4.6	11,635	65.1	1,829	10.2	395	2.2	1,252	7.0	298	1.7
Newfoundland.....	835	186.3	-	-	-	-	-	-	-	-	-	-	-	-
Prince Edward Island....	377	366.0	-	-	-	-	-	-	-	-	-	-	-	-
Nova Scotia .....	2,505	344.6	-	-	168	23.1	-	-	-	-	24	3.3	-	-
New Brunswick .....	1,331	226.0	-	-	-	-	-	-	-	-	38	6.5	-	-
Quebec .....	17,212	334.7	305	1.8	1,100	21.4	-	-	395	7.7	403	7.8	240	4.7
Ontario .....	14,821	242.5	64	1.0	4,751	77.7	-	-	-	-	451	7.4	-	27
Manitoba .....	2,355	259.9	56	6.2	1,014	111.9	-	-	-	-	77	8.5	58	6.4
Saskatchewan .....	2,070	226.2	-	-	1,109	121.2	-	-	-	-	105	11.5	-	-
Alberta .....	2,923	226.4	-	-	1,870	144.8	510	39.5	-	-	90	6.9	-	-
British Columbia.....	2,884	180.0	228	14.2	1,623	101.3	1,319	82.3	-	-	64	4.0	-	-

<sup>1</sup> Non-reporting facilities, for which bed capacity is listed in the directory, Dominion Bureau of Statistics, *Mental Health Statistics, 1960*, op. cit., pp. 152-154, are also included.

<sup>2</sup> Excludes federal institutions.

Source: Dominion Bureau of Statistics, *Mental Health Statistics, 1960*, Supplement: *Patients in Institutions*, Ottawa: Queen's Printer, 1962, pp. 15-18.



Other provinces have additional separate institutions for patients with epilepsy, mental retardation, psychoses of the senium, and disturbed children, as well as psychiatric hospitals, and psychiatric units of general hospitals.

## Occupancy

### Definition

For many years mental institutions have been overcrowded. The ratio of the average number of hospitalized patients to the bed capacity is the measure of occupancy. A rate of 106 per cent indicates that, on the average, 106 patients occupied hospital facilities which under minimum standards should contain less than 100 patients.<sup>14</sup>

Block states that occupancy is an effective quantitative measurement of use of existing beds but is not an indication of quality of care; the higher the occupancy the greater the indication of needs and the greater the indication that these needs are or are not being met.<sup>15</sup> The level of occupancy that is desirable and effective from an operational point of view approximates 90 per cent for mental hospitals.<sup>16</sup>

### Trends, 1932-1960

For well over a century the history of Canada's mental hospitals has been described as a record of bed shortages both with respect to the needs of the general population and to overcrowding within the institutions.<sup>17</sup>

Institutions reporting bed capacity were overcrowded by approximately 1 per cent (N=339) in 1932, approximately 20 per cent (N=9,399) in 1951 and about 3 per cent (N=1,820) in 1960. This is an underestimate of overcrowding since it is based on the number of patients in institutions at the end of the year, which is lower than the average number hospitalized throughout the year.

Overcrowding was highest during the late nineteen-forties. In 1948, data based on provincial health survey reports and correspondence, indicated an overcrowding of 28 per cent or a lack of 11,928 beds.<sup>18</sup> By 1958 overcrowding had been reduced to 14 per cent, but 8,391 additional beds would be "required" to eliminate overcrowding.<sup>19</sup>

### Canada and Provinces, 1960

Occupancy varied provincially and in different types of institution. The highest degree of overcrowding occurred in public mental hospitals, which were, on the average, overcrowded by 5,561 patients.<sup>20</sup>

<sup>14</sup> Dominion Bureau of Statistics, *Mental Health Statistics*, 1960, *op. cit.*, p. 31.

<sup>15</sup> Block, L., *Hospital Trends*, Chicago: Hospital Topics, 1956, pp. 20-21.

<sup>16</sup> *Ibid.*

<sup>17</sup> Department of National Health and Welfare, *Mental Health Services in Canada*, *op. cit.*, p. 42, and *Hospital Care in Canada: Recent Trends and Developments*, Health Care Series, Memorandum No. 15, Ottawa: Queen's Printer, 1960, p. 42.

<sup>18</sup> Department of National Health and Welfare, *Hospital Care in Canada: Recent Trends and Developments*, *op. cit.*, pp. 39-40.

<sup>19</sup> *Ibid.*, p. 39.

<sup>20</sup> Dominion Bureau of Statistics, *Mental Health Statistics*, 1960, *op. cit.*, p. 36.

TABLE 3-4

PATIENTS IN INSTITUTIONS AND REPORTED BED CAPACITY, ALL INSTITUTIONS,  
CANADA AND PROVINCES, 1932, 1951 AND 1960

Province	1932		1951		1960	
	Patients in Institutions Dec. 31	Reported Bed Capacity	Patients in Institutions Dec. 31	Reported Bed Capacity	Patients in Institutions Dec. 31	Reported Bed Capacity
CANADA.....	33,290	32,951	55,395	46,096	66,339	64,519
Newfoundland.....	—	—	698	530	928	835
P.E.I.....	262	300	292	250	303	377
Nova Scotia.....	1,525	1,951	2,421	2,412	2,417	2,695
New Brunswick.....	883	900	1,553	1,100	1,873	1,401
Quebec.....	9,439	8,875	15,896	14,961	19,736 <sup>1</sup>	19,440 <sup>1</sup>
Ontario.....	11,626	11,666	18,355	15,090	22,073	21,295
Manitoba.....	2,329	2,249	3,290	2,608	3,946	3,562
Saskatchewan.....	2,561	2,450	4,593	2,926	4,427	3,273
Alberta.....	1,870	1,875	3,453	2,854	4,715	5,408
British Columbia...	2,795	2,685	4,844	3,365	5,921	6,233

<sup>1</sup>1960 data for Quebec incomplete.

Source: Dominion Bureau of Statistics, *Mental Health Statistics, 1960, op. cit., pp. 41, 43.*

TABLE 3-5

PERCENTAGE OCCUPANCY, ALL PSYCHIATRIC INSTITUTIONS AND PUBLIC  
MENTAL HOSPITALS,  
CANADA AND PROVINCES, 1960

Province	All Institutions	Public Mental Hospitals
CANADA.....	106	110
Newfoundland.....	109	109
Prince Edward Island.....	79	79
Nova Scotia.....	88	89
New Brunswick.....	136	140
Quebec.....	100	101
Ontario.....	112	115
Manitoba.....	111	120
Saskatchewan.....	136	156
Alberta.....	92	97
British Columbia.....	102	115

Source: Dominion Bureau of Statistics, *Mental Health Statistics, 1960, op. cit., p. 36.*

### Accommodation and Occupancy, 1948 and 1960

Between 1948 and 1960 bed capacity increased to a greater extent than the average daily population, so that occupancy decreased from 128 per cent to 105 per cent.

TABLE 3-6  
BED CAPACITY AND AVERAGE DAILY POPULATION OF MENTAL INSTITUTIONS,<sup>1</sup>  
CANADA AND PROVINCES, 1948<sup>2</sup> AND 1960<sup>3</sup>

Canada and Provinces	Estimated Rated Bed Capacity		Average Daily Population		Average Daily Population per 100 Bed Capacity		Bed Capacity per 1,000 Population		Average Daily Population per 1,000 Population	
	1948	1960	1948	1960	1948	1960	1948	1960	1948	1960
CANADA .....	41,995	64,911	53,923	67,895	128	105	3.2	3.6	4.1	3.8
Newfoundland .....	263	835	650	913	247	109	0.8	1.9	1.9	2.0
Prince Edward Island .....	200	377	305	298	153	79	2.2	3.7	3.3	2.9
Nova Scotia .....	2,439	2,673	2,781	2,356	114	88	3.9	3.7	4.4	3.2
New Brunswick .....	912	1,950	1,395	1,864	153	96	1.8	3.3	2.8	3.2
Quebec .....	12,336	20,143	16,091	19,648	130	98	3.3	3.9	4.2	3.8
Ontario .....	14,093	20,899	17,008	23,458	121	112	3.3	3.4	4.0	3.8
Manitoba .....	2,430	3,425	3,203	3,848	132	112	3.3	3.8	4.3	4.2
Saskatchewan .....	2,877	3,179	4,463	4,366	155	137	3.4	3.5	5.3	4.8
Alberta .....	2,858	5,303	3,337	4,871	117	92	3.3	4.1	3.9	3.8
British Columbia .....	3,587	6,127	4,690	6,273	131	102	3.3	3.8	4.3	3.9

<sup>1</sup> Includes all public, private and federal mental hospitals, psychiatric hospitals, hospitals for mentally retarded and institutions for the aged, senile and epileptics. Excludes psychiatric units in general hospitals.

<sup>2</sup> Based on data from provincial health survey reports and correspondence.

<sup>3</sup> Based on Dominion Bureau of Statistics, *Mental Health Statistics, 1960*.

Source: Department of National Health and Welfare, *Hospital Care in Canada, Recent Trends and Developments*, op. cit., Table A 17, and special tabulations provided to the Royal Commission on Health Services.

### Federal Assistance for Construction of Psychiatric Accommodation, 1948-1961

Construction of 20,651 psychiatric beds was approved for assistance under the Federal Hospital Construction Grant between April 1, 1948, and March 31, 1961. This figure includes beds which had been constructed as well as those for which assistance had been approved.<sup>21</sup> In addition there was an unknown amount of accommodation which may have been added without assistance from the Hospital Construction Grant.

Federal assistance under the Hospital Construction Grant was \$1,500 per bed from 1948 to 1957, and \$2,000 from 1958 on. Between 1948 and 1959 construction costs of these beds ranged between \$5,000 and \$8,900 per bed, the median value being \$6,550.<sup>22</sup> The estimated construction cost at this median figure is \$135 million.<sup>23</sup>

There have been considerable variations in the type of accommodation which was assisted. Between 1948 and 1954, 6,507 beds were added to institutions for mentally retarded, while 374 beds were added in the period 1954 to 1959. Mental hospital construction increased from 4,779 during 1948-1954 to 7,365 during 1954-1959. In contrast to the construction of 19,025 beds in mental hospitals and institutions for the mentally retarded, assistance was given to 988 beds in general hospitals and all other types of facility.

TABLE 3-7

ADDITIONAL HOSPITAL ACCOMMODATION FOR PSYCHIATRIC PATIENTS,  
FINANCED IN PART BY FEDERAL HOSPITAL CONSTRUCTION GRANT,  
CANADA, 1948-1961

	April 1948- June 1954 <sup>1</sup>	June 1954- March 1959	April 1948- March 1959 <sup>2</sup>	April 1948- March 1961 <sup>3</sup>
Mental hospitals . . . . .	4,779	7,365	12,144	
Institutions for mentally retarded, . . .	6,507	374	6,881	
General and other hospitals <sup>4</sup> . . . . .	473	515	988	
Total . . . . .	11,779 <sup>5</sup>	8,234	20,013	20,651

<sup>1</sup>Department of National Health and Welfare, *Mental Health Services in Canada*, op. cit., p. 47 and Erratum July, 1954.

<sup>2</sup>Department of National Health and Welfare, *Canada and World Health Year, Canada's Health and Welfare*, 15(3), March 1960, Supplement No. 37.

<sup>3</sup>Department of National Health and Welfare, *National Health Grants, 1948-1961*, op. cit.

<sup>4</sup>Includes other types of psychiatric institutions.

<sup>5</sup>Sic.

<sup>21</sup>Department of National Health and Welfare, *National Health Grants 1948-1961*, op. cit., p. 44.

<sup>22</sup>Department of National Health and Welfare, *Hospital Care in Canada*, op. cit., Table A31.

<sup>23</sup>In 1931, the capital investment of mental institutions was estimated as \$53 million, or \$1,731 per resident patient. Dominion Bureau of Statistics, *Census of Canada, 1931*, Vol. IX, op. cit., p. 191.



The standard bed capacity of public mental hospitals in Canada represented a ratio of 265 beds per 100,000 population at the end of 1960 (Table 3-1). In the United States the ratio of non-federal "acceptable" mental hospital beds was 258 per 100,000 in 1959.<sup>24</sup>

During the 15-year period 1946-1961, the Hill-Burton Program of the United States Department of Health, Education, and Welfare approved the construction of 16,252 beds in mental institutions, costing a total of \$141.4 million.<sup>25</sup> During the 11-year period 1948-1959, the Canadian Federal Construction Grant approved the construction of 12,144 beds in mental hospitals and 6,881 beds in hospitals for mentally defectives. If it is assumed that *all* of the U.S. construction was in mental hospitals, the mean annual amount of mental hospital accommodation which was approved for federal assistance was 1,104 in Canada and 1,083 in the United States.

At least four-fifths of the mental hospital construction represented additions to existing hospitals.

"Although there has been a flurry of suggestions recently to construct "small" mental hospitals of 400 to 500 beds in close proximity to medical centres or general hospitals, comparatively little change is apparent so far. Nearly all assistance toward the expansion of all-purpose mental hospital facilities, provided under the Hospital Construction Grant since 1948, has been for additions to existing hospitals. Up to 1958, only 3 new all-purpose hospitals with an aggregate of 1,700 beds, had been fully completed with grant assistance, compared to 20 hospital additions totalling 6,500 beds."<sup>26,27</sup>

A list of mental hospitals and hospitals for the mentally retarded operated by the provinces at Dec. 31, 1960, is found in Appendix 3-3. The year of establishment and bed capacity in 1932, 1948 and 1960 indicate the distribution of additional construction.

### Formula Estimates of Canadian Needs for Psychiatric Accommodation

For many years various standards have been quoted which cite the "required" ratios of psychiatric beds to population. In 1945, a ratio of 550 beds per 100,000 was stated as necessary for the mentally ill, epileptic, and mentally defective.<sup>28</sup> (See Appendix 3-4).

<sup>24</sup>United States Department of Health, Education, and Welfare, Report of the Surgeon General's Ad Hoc Committee on Planning for Mental Health Facilities, Planning of Facilities for Mental Health Services, Public Health Service Publication No. 808, Washington: United States Government Printing Office, 1961.

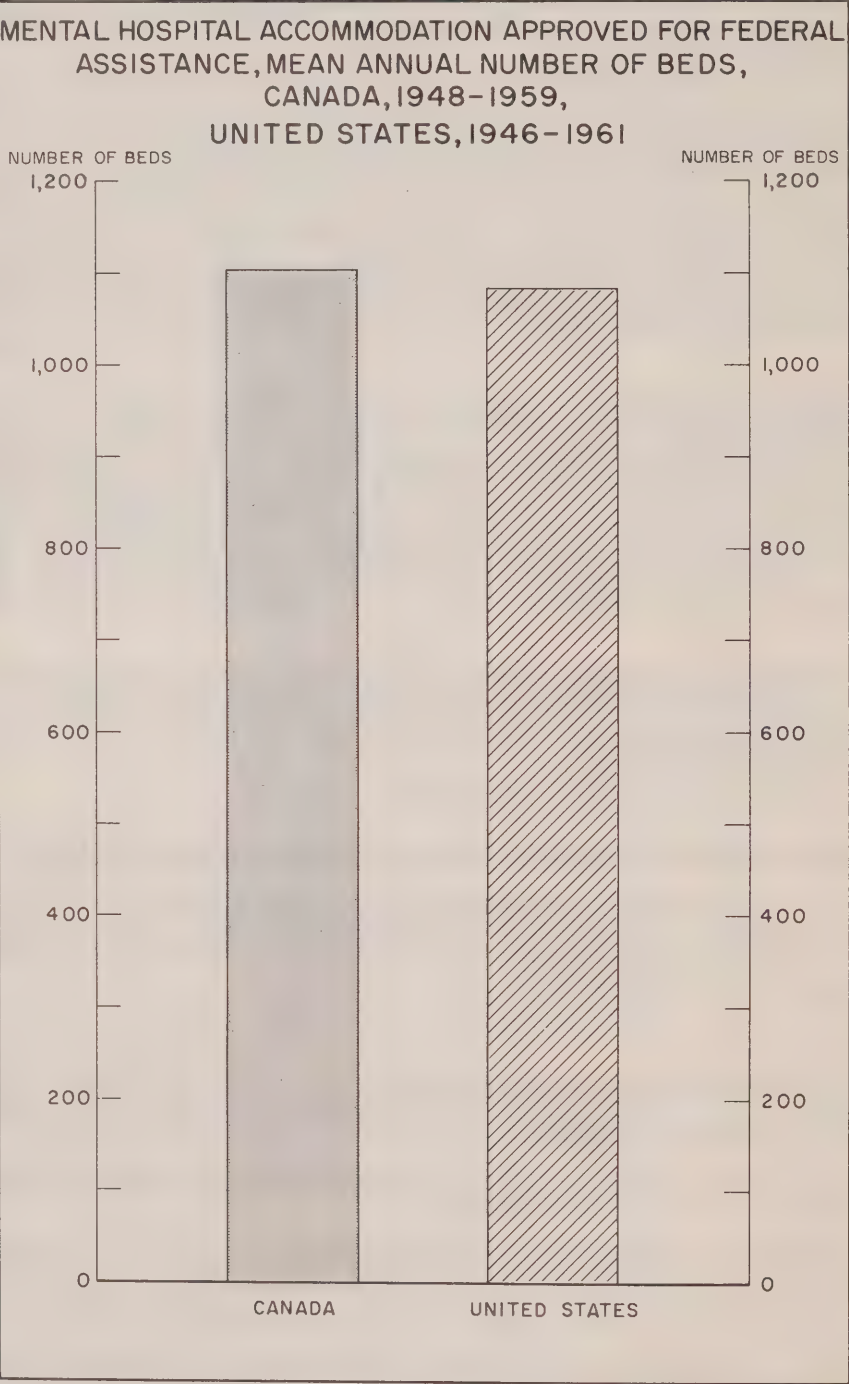
<sup>25</sup>United States Department of Health, Education, and Welfare, *Medical Care Financing and Utilization*, Health Economics Series No. 1, Public Health Service Publication No. 947, Washington: United States Government Printing Office, 1962.

<sup>26</sup>Department of National Health and Welfare, *Hospital Care in Canada*, March, 1960, *op. cit.*, p. 40. A later revision (September 1964) of this publication describes 4 new hospitals with 3,716 beds, and 20 additions with 6,860 beds having been completed up to 1962.

<sup>27</sup>There is an apparent discrepancy between the 8,500 mental hospital beds cited above and the 12,144 shown in Table 3-7.

<sup>28</sup>Dominion Provincial Conference on Reconstruction, *Health, Welfare and Labour Reference Book*, Ottawa: King's Printer, 1945, p. 24.

FIGURE 3-1



In 1960, the problems in estimating the need for mental hospital beds were described by the Department of National Health and Welfare in this manner:

“Despite new construction, continued overcrowding and growing admission rates indicate that more facilities are necessary to provide adequate treatment and in-patient care for all who need it. The extent of the bed shortage is extremely difficult to estimate, . . .”  
“. . . The growing availability and use of out-patient clinics, day treatment centres and the development of specialized facilities for groups such as mentally defective patients are among the factors influencing the need for residential hospital care. Similarly, changes in treatment, may tend to increase or to decrease the incidence of hospitalization, and the average duration of hospital stay of mental patients. Other variables which complicate even crude forecasting of future needs are the rate of obsolescence of mental hospitals, the rates of population growth and changes in the age-distribution and geographical distribution of the population.”<sup>29</sup>

A “tentative” estimate of 5 mental hospital beds per 1,000 population was given:

“For the purposes of tentative estimates, some authorities have suggested that a ratio of five mental hospital beds per thousand population might serve as a conservative measure of adequacy under current North American conditions. (In the United States, 5 beds per thousand population is the standard for mental bed needs prescribed in the Public Health Service regulations under the Hospital Survey and Construction Act.) If this theoretical ratio is applied to the estimated rated bed capacity of Canada’s mental hospitals at the end of 1958, the over-all shortage of accommodation—in quantitative terms only—appears to be about 26,500 beds, with approximately 3.4 rated beds available per thousand population as against the suggested 5.0 per thousand.”<sup>30-31</sup>

TABLE 3-8  
RATED BED CAPACITY, AVERAGE DAILY POPULATION,  
ESTIMATED BED REQUIREMENTS AND SHORTAGES,  
MENTAL INSTITUTIONS,<sup>1</sup> CANADA, 1948 AND 1958

	Total Beds		Beds per 1,000 Population	
	1948	1958	1948	1958
Rated bed capacity .....	41,995	58,800	3.2	3.4
Average daily population .....	53,923	67,191	4.2	3.9
Estimated bed requirement .....	64,115	85,240	5.0	5.0
Estimated bed shortage <sup>2</sup> .....	22,383	26,440	1.8	1.6

<sup>1</sup>Excludes psychiatric units in general hospitals.  
<sup>2</sup>Estimated bed requirement minus standard bed capacity.  
Source: Department of National Health and Welfare, *Hospital Care in Canada*, op. cit., p. 40.

The obsolescence of existing mental hospitals in Canada was also referred to.

“The bulk of in-patient care for psychiatric patients continues to be provided by some 35 large all-purpose public mental hospitals, located usually in rural surroundings, removed from population concentration as well as from other medical facilities. In

<sup>29</sup>Department of National Health and Welfare, *Hospital Care in Canada*, op. cit., p. 42.  
<sup>30</sup>*Ibid.*, p. 43.  
<sup>31</sup>Bed data exclude psychiatric units in general hospitals. Inclusion of these beds would reduce the theoretical bed shortage by 1,300 beds.

many instances, the original hospital building was first built in the nineteenth century, with further construction of additional wings or units through the years as the demand for accommodation increased. On an average day, these institutions now shelter well over 1,000 patients each . . ."<sup>32</sup>

"In contrast to the traditional concept of a large and geographically remote mental hospital, much attention is currently being directed to the possibility of developing small hospitals and units as the basic structure for treating all classes of mental patients. Such proposals envisage smaller, even cottage-like, mental hospitals with the institutional, non-personal atmosphere reduced to a minimum and located in immediate proximity or at least within easy access to general hospitals. If these contentions are valid, the problem of replacing a large number of obsolete structures takes on importance along with that of increasing the total bed supply."<sup>33-34</sup>

By 1962, a report by the Department of National Health and Welfare estimated that much mental hospital accommodation could be considered obsolete and quoted "required" bed ratios of 3.65 to 5 per 1,000 population.

"Many of Canada's mental hospitals were constructed about the turn of the century and, although they have been added to over the years, many of the original buildings are still in operation. Advances in psychiatric treatment accentuated the inadequacy of these buildings. Many of them are not of fire-resistant construction, and it is estimated that most could be considered obsolete.

"Current opinion is that the need is for additional personnel and for facilities such as day care and night care centers, rather than additional mental hospital beds, other than the replacement of obsolete accommodation. The trend is now away from large mental institutions, often remote from other medical facilities and toward the development of smaller units so located that supplementary medical services are easily within reach and that the patients are not too far removed from their home communities.

"World Health Organization, P.H. Paper No. 1, 1959, estimated that at least 3.65 beds per 1,000 population are required to care for this type of patient. However, care should be exercised in applying this figure to Canada because many beds are now in use that could be condemned as obsolete. Others have recommended as high as 5 beds per 1,000 for mental patients and that cottage plans and home care facilities should be fully used."<sup>35</sup>

Applications of such formulae are not realistic and are inadequate criteria for the planning of psychiatric services. References to bed-population ratios as bases of planning were excluded from a 1961 report by the United States Surgeon General's *Ad Hoc* Committee on Planning for Mental Health Facilities.<sup>36</sup>

The published report stated:

"In the past, health authorities have attempted to estimate facility needs on a formula basis. Previously used indices of need such as ratios of mental hospital beds to population served are no longer believed to be realistic because of the constant changes brought about by such factors as new developments in treatment methods, the increased numbers of the aged, and improved social and economic status of the

<sup>32</sup> Department of National Health and Welfare, *Hospital Care in Canada*, op. cit., p. 39.

<sup>33</sup> *Ibid.*, p. 43.

<sup>34</sup> This statement (with the omission of 'non-personal') was repeated in the September 1964 edition of *Hospital Care in Canada*.

<sup>35</sup> Department of National Health and Welfare, *National Health Grants, 1948-1961*, op. cit., pp. 40-41.

<sup>36</sup> United States Surgeon General, Proceedings 1961, Annual Conference with State and Territorial Mental Health Authorities, Jan. 5-7, Washington, D.C., Public Health Service Publication No. 851, Washington: United States Government Printing Office, 1961, p. 4.



population. These factors complicate the planning process, making it unfeasible to plan by merely applying a mechanical ratio of beds per thousand population."<sup>37</sup>

Emphasis was placed on the need for evaluating all existing services and facilities in order to provide adequate care and treatment for all persons needing mental health services.<sup>38</sup> Basic data on the number and types of cases needing psychiatric care were essential for evaluating the actual effectiveness of services already in existence, the need for providing new or additional facilities and services, and the nature and location of such facilities for maximum benefit to the population of the area to be served.<sup>39</sup> The ultimate elimination of large state mental institutions as they now exist was given as one of the major long-range objectives of all state-wide pleas.<sup>40</sup>

Further discussion of Canadian requirements for hospital care is found in Chapter 22.

### Conclusions

(i) Prior to 1948 most patients with severe psychiatric illnesses were treated in mental hospitals, where custody rather than therapy was emphasized.

(ii) The provinces differ markedly in the type and amount of accommodation provided.

(iii) Construction of additional accommodation and reduction of the population ratio of hospitalized patients has reduced overcrowding.

(iv) Federal assistance for construction of psychiatric accommodation between 1948 and 1961 was largely directed to mental hospitals and institutions for mentally retarded. A higher amount of mental hospital accommodation was approved for federal assistance in Canada than in the United States between 1948 and 1959.

(v) Estimates of the need for psychiatric accommodation, based on standard formulas of beds to population are unrealistic. Basic data on the number and types of cases needing psychiatric care are essential.

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<sup>37</sup>United States Department of Health, Education, and Welfare, Report of the Surgeon General's *Ad Hoc* Committee on Planning for Mental Health Facilities, *op. cit.*, p. 30.

<sup>38</sup>*Ibid.*, p. 30.

<sup>39</sup>*Ibid.*

<sup>40</sup>*Ibid.*, p. 25.



## TYPES OF PSYCHIATRIC INSTITUTIONS

"After nearly 200 years of orientation to the concept of congregate care for the mentally retarded and the mentally ill, it is difficult to change the pattern and adopt a new frame of reference. As long as we have major financial investments in large plants, it will be a temptation to some to defend them as satisfactory or even preferable."<sup>1</sup>

### Introduction

#### *Purpose of Chapter*

In the 1930's, public mental hospitals provided the bulk of in-patient care. In subsequent years other types of facility were developed and extended. The purpose of this chapter is to describe some features of the various in-patient institutions.

#### *Definitions*

Currently, the major types of psychiatric institutions are defined in this manner:<sup>2</sup>

**Mental hospital**—Institutions that provide treatment for all types of psychiatric conditions.

**Psychiatric hospitals**—Institutions that provide short-term, intensive psychiatric treatment.

**Hospital for mentally retarded**—Institutions that provide care for mentally defective patients, including training schools for mentally defectives.

**Psychiatric unit**—Units within hospitals that are organized for the treatment of patients with psychiatric disorders.

#### *Trends, 1941-1960*

The number of patients on books of psychiatric institutions other than public mental hospitals increased from 4,576 in 1941 to 17,144 in 1960. Most of the increase occurred in hospitals for mentally retarded. Patients on books of psychiatric hospitals increased from 97 to 549.

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<sup>1</sup>United States, The President's Panel on Mental Retardation, *Report to the President, A Proposed Program for National Action to Combat Mental Retardation*, Washington: United States Government Printing Office, 1963.

<sup>2</sup>Dominion Bureau of Statistics, *Mental Health Statistics*, 1960, *op. cit.*, p. 9.

Data for patients in psychiatric units were under-reported in 1960. In 1961, 47 public psychiatric units with a standard bed capacity of 1,797 were in operation.<sup>3</sup>

**TABLE 4-1**  
PATIENTS ON BOOKS AT DECEMBER 31, BY TYPE OF INSTITUTION,  
CANADA, 1941, 1951, 1956, 1960

	1941	1951	1956	1960 <sup>1</sup>
TOTAL .....	49,245	60,263	71,851	76,452
Mental hospitals, public <sup>2</sup> .....	44,669	52,825	57,171	59,308
Hospitals for mentally retarded, public .....	3,200	5,381	9,551	12,194
Psychiatric hospitals, public .....	97	313	523	549
Federal institutions .....	744	1,405	1,514	1,354
Private institutions .....	535	339	400	407
Aged and senile homes, public .....	—	—	1,760	1,750
Epilepsy hospitals, public .....	—	—	256	210
Psychiatric units, public .....	—	—	676	680 <sup>3</sup>

<sup>1</sup>1960 data for Quebec estimated.

<sup>2</sup>Includes patients in county and municipal institutions: 1941—1,719; 1951—1,777; 1956—2,308.

<sup>3</sup>Under-reported.

Source: Dominion Bureau of Statistics, *Tenth Annual Report of Mental Institutions*, 1941, Ottawa: King's Printer, 1943, p. 10; Dominion Bureau of Statistics, *Mental Institutions 1951*, Ottawa: Queen's Printer, 1953, p. 13; Dominion Bureau of Statistics, *Mental Health Statistics, 1956*, Ottawa: Queen's Printer, 1957, p. 170; Dominion Bureau of Statistics, *Mental Health Statistics, 1960*, Ottawa: Queen's Printer, 1962, p. 37.

## Characteristics of Institutions, 1960

During 1960 a total of 24.2 million patient-days were spent in mental institutions.<sup>4</sup> The bulk of this time was spent in public mental hospitals and institutions for the mentally retarded. There were marked differences in the various types of institutions.

### *Mental Hospitals*

There were 45 of these institutions, with a mean bed capacity of 1,059. Throughout the year an average of 52,194 patients were hospitalized, representing an overcrowding of 10 per cent. Over half of the patients in public mental hospitals had been continuously hospitalized for more than seven and a half years. The 21,197 admissions represented a ratio of 0.5 admissions per bed annually. The over 17,000 patients discharged during the year had spent 180,000

<sup>3</sup>Dominion Bureau of Statistics, *Mental Health Statistics, 1961*, Ottawa: Queen's Printer, 1963, p. 30.

<sup>4</sup>In comparison, 25.3 million patient days were spent in general hospitals. Dominion Bureau of Statistics, *Hospital Statistics, 1960*, Vol. I, op. cit.



months in hospital as compared to 3,600 deaths who had spent 338,000 months in hospital.

### *Psychiatric Hospitals*

Five psychiatric hospitals, with an average bed capacity of 131, had a mean of 590 residents during the year, and an occupancy of 90 per cent. There were 8.8 admissions per bed per year. The average stay of discharges was 1.4 months.

### *Hospitals for Mentally Retarded*

The 12 institutions for mentally retarded, with a mean bed capacity of 939, had an average of 11,392 residents during the year and were overcrowded by one per cent. One admission occurred per *ten* beds per year.

### *Psychiatric Units of General Hospitals*

The 26 reporting psychiatric units, with a mean bed capacity of 32, had an occupancy of 81 per cent, and admitted 11.6 patients per bed during the year. Patients were discharged after an average stay of 0.7 months. While psychiatric units had 1.4 per cent of the total bed capacity of Canadian psychiatric institutions, they took in one-fourth of all first admissions.

TABLE 4-2  
GENERAL CHARACTERISTICS OF PUBLIC PSYCHIATRIC  
IN-PATIENT FACILITIES,<sup>1</sup> CANADA, 1960

	Mental Hospitals	Hospitals for Mentally Retarded	Psychiatric Hospitals	Psychiatric Units of General Hospitals
Number of Institutions .....	45	12	5	26
Bed capacity.....				
Total .....	47,633	11,272	653	844
Mean number per institution....	1,059	939	131	32
Patient days.....	19,103,183	4,169,512	216,094	248,802
Mean number of resident patients	52,194	11,392	590	680
Percentage occupancy .....	110%	101%	90%	81%
First admissions .....	12,892	1,206	3,503	6,511
Readmissions.....	8,305	113	2,213	3,265
Total admissions.....	21,197	1,319	5,716	9,776
Index of absorption				
<u>Total admissions</u>				
Bed capacity .....	0.5	0.1	8.8	11.6
Discharges .....	17,155	476	5,415	9,024
Deaths.....	3,738	189	16	32

<sup>1</sup>Schedule reports. Incomplete data from Quebec.

Source: Dominion Bureau of Statistics, *Mental Health Statistics, 1960, op. cit.*, pp. 36-37.

**TABLE 4-3**  
**PATIENT CHARACTERISTICS OF**  
**PUBLIC PSYCHIATRIC IN-PATIENT FACILITIES<sup>1</sup>, CANADA, 1960**

	Mental Hospitals	Psychiatric Hospitals	Psychiatric Units of General Hospital
<i>PATIENTS ON BOOKS</i> <i>DECEMBER 31</i>			
Number .....	58,757	549	815
Median stay (months) .....	89	n.a.	n.a.
<i>DIAGNOSTIC DISTRIBUTION</i> <i>OF FIRST ADMISSIONS</i>			
TOTAL .....	12,775=100.0%	3,465=100.0%	5,426=100.0%
Functional psychoses .....	36.6%	34.6%	33.0%
Schizophrenia and paranoid psychoses .....	25.2%	19.5%	15.0%
Affective psychoses .....	11.3%	15.1%	18.0%
Psychoses of senium .....	17.5%	1.9%	3.1%
Neurotic depressions and anxiety reactions .....	6.6%	23.9%	32.5%
<i>DISCHARGES</i>			
Number .....	17,021	5,381	7,706
Mean stay (months) .....	10.6	1.4	0.7
Aggregate stay (months) .....	180,423	7,533	5,394
<i>DEATHS</i>			
Number .....	3,623	16	30
Mean stay (months) .....	93.2	0.7	0.9
Aggregate stay (months) .....	337,664	11	27

<sup>1</sup> On card-reporting system. Data for Quebec incomplete.

Source: Dominion Bureau of Statistics, *Mental Health Statistics, 1960, op. cit.*, pp. 74-76, 105, 125, and *Supplement: Patients in Institutions, 1960, op. cit.*, p. 15.

#### *Diagnoses of Admissions<sup>5</sup>*

One-third of the first admissions to mental hospitals, psychiatric hospitals, and psychiatric units of general hospitals were functional psychoses. Two-thirds of the functional psychoses admitted to public mental hospitals were diagnosed as schizophrenic and paranoid psychoses, while in public psychiatric units the

<sup>5</sup>The diagnostic classifications used by Dominion Bureau of Statistics and in this study are described in Appendix 4-1.

majority of functional psychoses were diagnosed as affective psychoses. Whether this is a difference in selection or a variation in diagnostic practice is not known. Psychoses of the senium formed nearly one-fifth of first admissions to public mental hospitals.

### *Disposition of Separations*

Approximately 7 per cent of the separations from both psychiatric units and psychiatric hospitals were transferred to other types of psychiatric institutions.<sup>6</sup> There are no national data indicating the disposition of *admissions* to various types of institutions.

## **Psychiatric Divisions of General Hospitals**

"To Quebec City goes the credit of establishing in 1639 the first hospital 'for the care of indigent persons, the crippled and idiots'. This institution, the Hotel Dieu du Précieux Sang, is noteworthy as making no distinction in admitting both physical and mental disabilities. It was thus a *general* hospital in the true sense, however, primitive.

"In later usage, unfortunately, the so-called general hospitals, for the most part, restricted their service to physical infirmities; mental patients were rigorously excluded, and the progress of psychiatry was thereby greatly retarded. Only in recent decades has the pendulum been swinging back; and today any large hospital without a psychiatric service is not fulfilling its proper function."<sup>7</sup>

### *Historical Development*

The Canadian Mental Health Association was an early advocate of general hospital psychiatry. In the 1919 Mental Hygiene Survey of British Columbia it was stated that the day had passed when it was necessary to draw attention to the importance of psychopathic wards in connection with every general hospital. The rights of the insane to early scientific treatment were emphasized, as was the need for physicians and students in general hospitals to be put in the position of seeing and learning more of the disease and its treatment.<sup>8</sup>

The 1920 Mental Hygiene Survey of Saskatchewan placed similar stress on the need for psychiatry at general hospitals.

"It is now very clearly established that in the prevention and early treatment of cases of insanity the building of small psychopathic hospitals provides the ideal plan for meeting the situation. These small institutions are preferably located near general hospitals for various reasons, and are organized upon similar lines. In other words, they are hospitals in every sense of the term."<sup>9</sup>

The brief presented by various Directors of provincial Mental Health Services, and Professors of Psychiatry to the 1943 House of Commons Special

<sup>6</sup>Dominion Bureau of Statistics, *Mental Health Statistics*, 1960. *op. cit.*, pp. 105, 140.

<sup>7</sup>Farrar, C. B., The early days of treatment of mental patients in Canada. *CAMSI Journal*, 13-15, February 1962.

<sup>8</sup>Canadian National Committee for Mental Hygiene, Mental hygiene survey of British Columbia, *Can. J. ment. Hyg.* 2:1-59, 1920.

<sup>9</sup>Canadian National Committee for Mental Hygiene, Mental hygiene survey, province of Saskatchewan, *Can. J. ment. Hyg.* 3:391-396, 1922.

Committee on Social Security stated that the most important step toward integration of the medical fields was the establishment of full psychiatric services in general hospitals.<sup>10</sup>

### *Trends in Patient Load*

Psychiatric services in general hospitals have expanded mainly during the last decade. The total reported bed allotment for psychiatric patients in general hospitals with 100 or more beds increased from 318 in 1951<sup>11</sup> to 1,331 in 1959.<sup>12</sup> These 1,331 beds represented 2 per cent of the total bed capacity of general hospitals with 100 or more beds. Psychiatric divisions of general hospitals increased in bed capacity from 225 beds in 1951 to 1,010 beds in 1959.<sup>13</sup>

Although statistical reporting from psychiatric units to DBS began in 1953,<sup>14</sup> it is difficult to describe statistical trends for the period 1953-1960 because of: irregular reporting from individual hospitals or provinces; variation in definition of a psychiatric unit (Westminster Hospital, London, was categorized as a psychiatric unit in 1955); and the combining of data from public and federal psychiatric units. The marked growth of public psychiatric units in Ontario between 1956-1960 is shown in Appendix 4-2.

### *Role of Psychiatry in General Hospitals*

The share of psychiatric care provided by psychiatric divisions of general hospitals has progressively increased and presently has assumed significant proportions. Nevertheless, there have been totally opposing views of their effectiveness. In fact, these opposite views were presented in the 1956 issue of *Mental Health Statistics*. On page 30, psychiatric units are regarded as providing effective treatment for patients with severe mental illness.

"Much interest has arisen in the last few years over the implications of the newly-developing and rapidly-expanding facilities for intensive, short-term care of psychiatric patients. It has been amply demonstrated that such treatment can frequently restore to normalcy many who otherwise might spend their lives as chronic mental cases in institutions, or else as relatively ineffective members of the community."

On page 114 of the same report, the opposite view is expressed:

"Psychiatric units, for instance, typically treat psychoneurotic patients and send them home or diagnose psychotic patients and send them to long-stay mental hospitals . . ."

Proponents of mental hospitals claim that the "average" patient can be best treated in the mental hospital and that psychiatric units in general hospitals

<sup>10</sup> Canada, House of Commons, Special Committee on Social Security, Minutes of Proceedings and Evidence No. 11, May 18, 1943, pp. 315-323.

<sup>11</sup> Roberts, C. A., et al., Psychiatric services in general hospitals in Canada: five years of development, 1951-1956, *Canad. med. Ass. J.* 78:774-778, 1958.

<sup>12</sup> Dominion Bureau of Statistics, *Hospital Statistics, 1959*, Vol. I, Ottawa: Queen's Printer, 1961.

<sup>13</sup> Due to incomplete reporting, *Mental Health Statistics, 1960*, lists public psychiatric units as having a bed capacity of 844.

At the end of 1961, 45 psychiatric units in public general hospitals were known to Dominion Bureau of Statistics, with a bed capacity of 1,404 beds. These psychiatric units made up 5.3 per cent of the bed capacity of their respective (N=45) general hospitals. (Dominion Bureau of Statistics, special tabulation, 1963).

<sup>14</sup> The number of reporting psychiatric units increased from one in 1953 to 32 in 1960, Dominion Bureau of Statistics, *Mental Health Statistics, 1960*, op. cit., p. 40.



provide a valuable means of treating some patients, but are unsuitable for the majority.<sup>15</sup>

"There are some advantages in sending mental patients to general hospitals—the lack of stigma in treatment, and the fact that visiting is easier for patients in a town centre. The disadvantages may not matter for a patient who is only to remain in hospital for a week or two, and for patients suffering from the known psychosomatic disorders, general hospital treatment may be definitely indicated; but it is a poor service to the average patient if, in order to avoid a now largely illusory stigma, we deny him the special conditions which only the mental hospital can adequately provide. Integration of general and psychological medical services at the national and regional level [in Britain] was achieved in 1948, with subsequent benefit to both. It is logical, but not sensible, to pursue integration at the clinical level."<sup>16,17</sup>

The use of general hospitals as clearing houses or switching points for psychiatric patients has also been deplored.

"The psychiatric divisions . . . more often are still being used as mere clearing houses and possibly increasing disability by retarding treatment. Others are forced to conform to a pattern of bed care found on other wards. Undue stress may be laid on the need for clear-cut diagnosis and somatic therapy. There is a danger that the general hospital may treat a large proportion of psychiatric patients capable of early recovery, and send on to the mental hospital only those with bad prognosis, lowering the mental hospital's status and ability to function as a therapeutic community.

"General hospitals have excellent potential as residential treatment centers for short term intensive treatment of acute cases. However, some of the psychiatric wards in general hospitals have been used in ways which distinctly increase the patient's disabilities. Such hospitals are not being used as treatment institutions. Rather, the patient is detained and 'spied upon,' and the hospital does not develop any true treatment commitment to him. Instead, it serves essentially as a switching point. The potential of general hospitals is not realized if they are used merely as clearing houses."<sup>18</sup>

Such problems may be avoided by providing comprehensive psychiatric services at the general hospital, which meet the needs of all classes of mentally ill patients and are closely integrated in function with existing medical and social services. A spectrum of services, which are functionally interrelated, allows the principle of progressive patient care to operate.<sup>19,20</sup>

The Canadian Psychiatric Association has endorsed the need for psychiatric services in *all* general hospitals.

"To provide comprehensive medical care to the communities they serve, all general hospitals should have psychiatric services. While the size and type of these psychiatric services will vary, depending on the size and other aspects of the general

<sup>15</sup> Jones, Kathleen and Sidebotham, R., *Mental Hospitals at Work*, London: Routledge and Kegan Paul, 1962, p. 14.

<sup>16</sup> *Ibid.*, p. 16.

<sup>17</sup> Other arguments by proponents of mental hospitals have been editorialized in *Psychiatric Quarterly*: No originality of proposition or proof, *Psychiat. Q.*, 35:576-585, 1961; One-eyed Jacks and Deuces Wild, *Psychiat. Q.*, 35:777-784, 1961; Sass for the Gander, *Psychiat. Q.*, 36:754-767, 1962; Gold from a Gilded Brick, *Psychiat. Q.*, 37:153-165, 1963.

<sup>18</sup> American Public Health Association, Program Area Committee on Mental Health, *Mental Disorders, A Guide to Control Methods*, New York: The Association, 1962, p. 11.

<sup>19</sup> Cawley, R. H., and Trethowan, W. H., *Psychiatry and the balanced hospital community, Medical Care*, 1:77-83, 1963.

<sup>20</sup> Richman, A., and Tyhurst, J. S., *Psychiatric care in a general hospital, Canad. Hosp.* 42(5):45-48, 1965.

hospital and its community, all general hospitals of over 200 beds should have an established psychiatric division with an in-patient service of at least 20 beds, to be increased as the size of the hospital or its community may require."<sup>21</sup>

The development of community mental health centres *separated* from general hospitals has been described as undesirable, stigmatizing, inefficient, isolating and wasteful by the American Hospital Association,<sup>22</sup> and by Querido:<sup>23</sup> "To erect such a centre as a separate hospital would be a costly duplication of a general hospital, and the same would be true if such a centre were attached to a mental hospital. The most effective way, therefore, seems to be to incorporate it into a general hospital, or to associate the two very closely."

### *Evaluation of Psychiatric Care in General Hospitals*

The annual publications of Dominion Bureau of Statistics do not permit suitable comparisons of the effectiveness of psychiatric units in general hospitals and other types of institutions to be made. Although the volume of psychiatric care in terms of patient-days or number of admission and separation events is tabulated, it is not possible to determine discharge or readmission rates for different institutions. Nor can suitable comparisons be made of admission rates or hospital utilization in areas having different types or combinations of institutions. Some reports of individual units have been made by Smith, McKerracher and McIntyre;<sup>24</sup> O'Reilly,<sup>25</sup> and Richman and Tyhurst.<sup>26</sup>

### **Conclusions**

(i) The major types of psychiatric institutions, mental hospitals, hospitals for the mentally retarded, psychiatric hospitals, and psychiatric units of general hospitals, differ markedly in their accommodation, average size, overcrowding, ratio of admissions to bed capacity, and ratio of discharges to deaths.

(ii) General hospital psychiatry has been long advocated in Canada, but has expanded mainly in the last decade. In 1960, general hospitals with 1.4 per cent of the total psychiatric bed capacity took in one-fourth of the first admissions. Approximately 7 per cent of the separations were transferred to other psychiatric institutions.

(iii) Although psychiatric units of general hospitals have assumed an increasing share of psychiatric care, it is not possible to determine their relative effectiveness from existing national statistics.

<sup>21</sup>Resolution adopted at Annual Meeting, Canadian Psychiatric Association, 1962, *Canad. psychiat. Ass. J.* 8:363, 1963.

<sup>22</sup>Pratt, H. N., on behalf of the American Hospital Association, Hearings before the Subcommittee on Health of the Committee on Labour and Public Welfare, United States Senate, on S. 755 and S. 756, March 5-7, 1963, pp. 116-119.

<sup>23</sup>Querido, A., *op. cit.*

<sup>24</sup>Smith, C. M., McKerracher, D. G., and McIntyre, S., *op. cit.*

<sup>25</sup>O'Reilly, P. O., The development and function of a comprehensive psychiatric service in the Moose Jaw Union Hospital: A five year study, *Canad. med. Ass. J.* 88:512-517, 1963.

<sup>26</sup>Richman, A., and Tyhurst, J. S., *op. cit.*

## PATIENT MOVEMENT

### Introduction

Patient movement refers to the movement of patients into and out of institutions.<sup>1</sup> This movement includes the entry of first admissions and readmissions, and the departure of discharges and deaths.

The patients on books represent the net result of these additions and depletions. If the admissions equal the separations the number of patients under care remains constant. If there are more admissions than separations during the year, the patient population at the end of the year is larger than at the start of the year.<sup>2</sup> This annual increase is referred to as increment.

The hospital population thus consists of a number of components, of admissions and separations, of residents recently admitted who have higher chances for discharge than long-stay patients, and long-stay patients for whom separation by death is more likely than discharge. The purpose of this chapter is to review national trends in patient movement as a preface to more detailed analyses of individual components in subsequent chapters.

### Trends in Patient Movement, 1932-1960

During the period the number of admissions and separations increased continually. Although the rate of first admissions per 100,000 population increased 107 per cent between 1932 and 1960, the rate of residents increased 17 per cent. The rate of readmission-events increased over five times, and that for discharges over four times. The rate of deaths increased to a less marked degree, 11 per cent.

### Diagnostic Differences in Patient Movement

More detailed analyses of patient movement are available from institutions submitting morbidity cards on individual patients. While more patients were

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<sup>1</sup>Clouston, T. S., Section on Mental Disease in *Index of Prognosis and End Results of Treatment by Various Writers*, (Short, A.R., ed.) 2nd. Edition, Bristol: John Wright, 1918.

<sup>2</sup>If all facilities are included in the reporting system transfers-in and transfers-out will balance.

admitted than left in each of the years selected, a shift in the diagnostic composition of the annual increment occurred.

TABLE 5-1

PATIENT MOVEMENT REPORTED ON SCHEDULES, NUMBER AND RATIO PER 100,000 POPULATION, ALL PSYCHIATRIC INSTITUTIONS, CANADA, 1932, 1941, 1951, 1956 AND 1960

Year	1932	1941	1951	1956	1960 <sup>1</sup>
Population of Canada (millions) .....	10.5	11.5	14.0	16.1	17.8
Patients on books, Dec. 31.....	35,279	49,245	60,263	71,851	76,452
Patients in institutions Dec. 31, Number.....	33,290	45,135	55,395	65,107	66,339
Ratio .....	317	392	395	405	372
Patients in Institutions .....	94%	92%	92%	91%	87%
Patients on Books					
Reported bed capacity					
Number .....	32,951	40,115	46,096	58,014	64,519
Ratio .....	314	349	330	362	363
First admissions					
Number .....	7,628	7,902	13,152	25,097	26,935
Ratio .....	73	69	94	156	151
Readmissions					
Number .....	1,828	2,401	4,591	11,341	16,186
Ratio .....	17	21	33	70	91
Discharges					
Number .....	5,183	6,468	13,123	30,974	36,768
Ratio .....	49	56	94	192	207
Deaths					
Number .....	2,347	2,628	3,190	3,724	4,512
Ratio .....	22	23	23	23	25

<sup>1</sup>Incomplete reporting from Quebec.

Source: Dominion Bureau of Statistics, *Mental Health Statistics, 1960, op. cit.*, pp. 40-47;

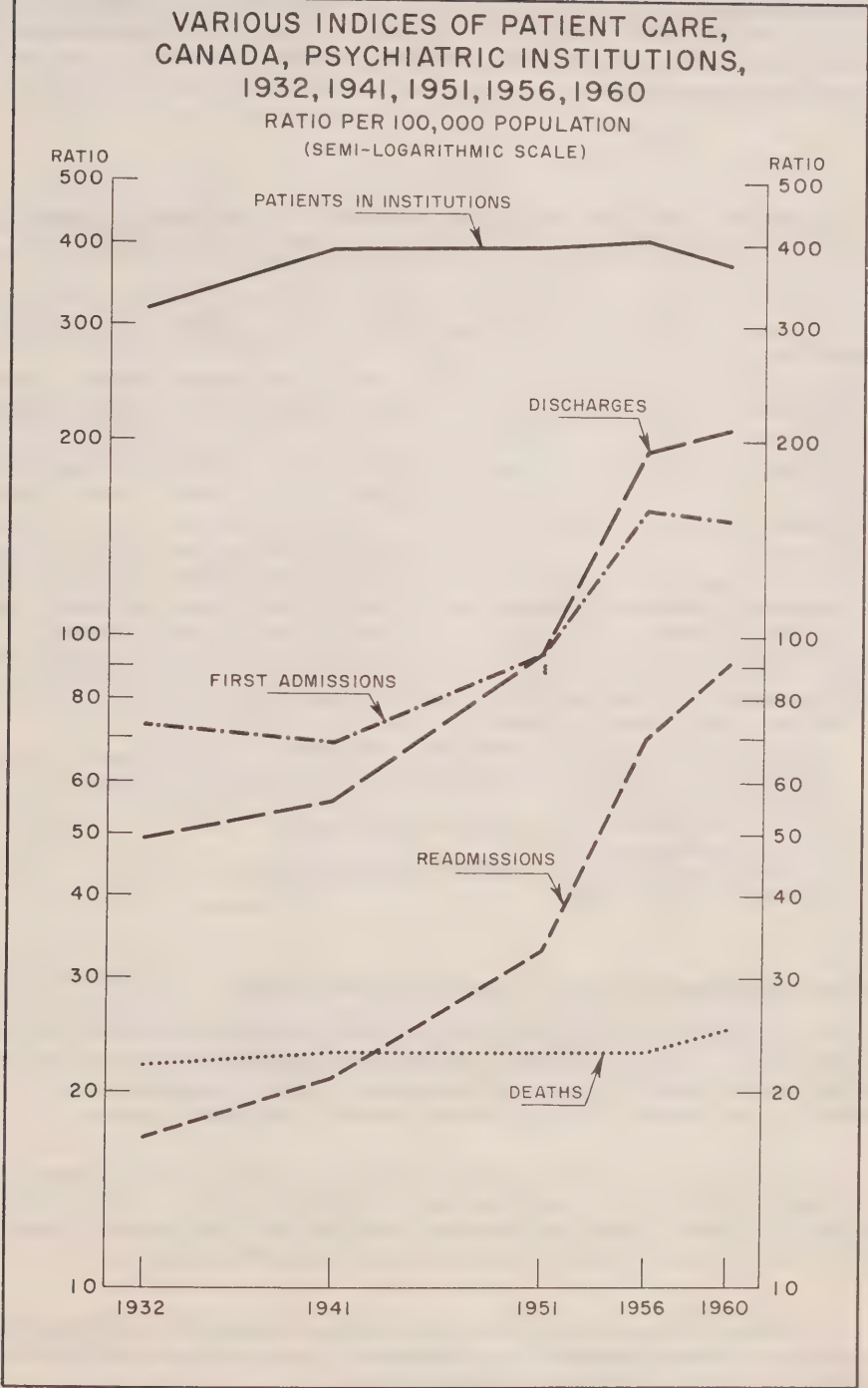
*Ibid.*, 1959, p. 49.

In 1932, 526 more patients were admitted with the diagnosis of schizophrenia and paranoid psychoses than left institutions. In subsequent years the annual increment for schizophrenia and paranoid psychoses decreased consistently, to 403 in 1951 and 224 in 1960.

The annual increment for patients with mental retardation fluctuated considerably during the years, from 44 in 1941 to 948 in 1960. Nearly one-half of the total increment during 1960 was due to patients with mental retardation.



FIGURE 5-1



More detailed tabulations are found in Appendices 5-1 and 5-2 which also indicate changes in the patients under care between 1932, 1956 and 1960. Between 1956 and 1960 the number of patients on books with schizophrenia and paranoid psychoses increased 1,048, affective psychoses decreased 52, and mental retardation increased 3,088.

**TABLE 5-2**  
**PATIENT MOVEMENT REPORTED ON MORBIDITY CARDS, AND INCREMENT**  
**BY DIAGNOSTIC GROUP, ALL PSYCHIATRIC INSTITUTIONS, CANADA,**  
**1932, 1941, 1951, 1956 AND 1960**

	1932	1941	1951	1956	1960
<b>ADMISSIONS</b>					
First.....	5,774	7,064	10,892	19,802	25,546
Readmissions.....	1,399	2,033	3,572	10,133	15,685
<b>SEPARATIONS</b>					
Discharges .....	3,384	5,410	9,939	24,955	34,981
Deaths .....	2,034	2,412	2,980	3,423	4,285
<b>INCREMENT (Admissions-separations)</b>					
All Diagnoses .....	+1,755	+1,275	+1,545	+1,647	+1,965
Functional psychoses .....	+702	+702	+388	+506	+221
Schizophrenia and paranoid psychoses.	526	499	403	348	224
Affective psychoses .....	176	203	-15	158	-3
Mental retardation .....	122	44	705	589	948

Source: Dominion Bureau of Statistics, *Mental Health Statistics, 1960*, Ottawa: Queen's Printer, 1962, pp. 51, 83, 103, 123;  
 Dominion Bureau of Statistics, *Annual Report, Mental Institutions, 1932*, Ottawa: King's Printer, 1934;  
 Dominion Bureau of Statistics, *Tenth Annual Report of Mental Institutions, 1941*, Ottawa: King's Printer, 1943;  
 Dominion Bureau of Statistics, *Mental Institutions, 1951*, Ottawa: Queen's Printer, 1953;  
 Dominion Bureau of Statistics, *Mental Health Statistics, 1956*, Ottawa: Queen's Printer, 1957.

### Patient Movement by Type of Institution, 1951-1960

In each type of institution the number of patients reported as first admissions increased, as did the number of separations. An increasing proportion of admissions consists of readmissions. Also, an increasing number of admissions are reported from psychiatric units of general hospitals.

The number of resident patients at the end of the year increased about 4 per cent in public mental hospitals between 1951 and 1960, and 120 per cent in hospitals for mentally retarded. Between 1956 and 1960 the number of deaths in public mental hospitals increased 25 per cent from 2,994 to 3,738.

In relation to population, there were marked changes in the average daily population of mental hospitals (a reduction of 10 per cent) and institutions for mentally retarded (an increase of 12 per cent).

TABLE 5-3

PATIENT MOVEMENT BY TYPE OF INSTITUTION, CANADA, 1951, 1956, 1960<sup>1</sup>

	1951	1956	1960
<i>Mental Hospitals, Public<sup>2</sup></i>			
First admissions .....	8,459	10,396	12,892
Readmissions .....	3,151	5,030	8,305
Discharges .....	8,406	11,944	17,155
Deaths .....	2,954	2,994	3,738
Patients in hospital, December 31 .....	48,493	51,337	50,742
<i>Psychiatric Hospitals, Public</i>			
First admissions.....	1,762	3,477	3,503
Readmissions .....	403	1,903	2,213
Discharges .....	1,660	5,123	5,415
Deaths .....	18	45	16
Patients in hospital, December 31.....	313	523	443
<i>Hospitals for Mentally Retarded, Public</i>			
First admissions .....	847	894	1,206
Readmissions .....	34	54	113
Discharges.....	193	264	476
Deaths .....	103	154	189
Patients in hospital, December 31.....	4,903	8,716	10,844
<i>Psychiatric Units, Public<sup>3</sup></i>			
First admissions.....		8,514	6,511
Readmissions .....		2,649	3,265
Discharges.....		10,390	9,024
Deaths .....		71	32
Patients in hospital, December 31.....		676	680

<sup>1</sup>Schedule reported.<sup>2</sup>Includes county and municipal institutions.<sup>3</sup>Not reporting for 1951.Source: Dominion Bureau of Statistics, *Mental Institutions, 1951, op. cit.*, pp. 13-14;*Ibid.*, *Mental Health Statistics, 1956, op. cit.*, pp. 47, 87, 125, 145, 170 and 171;*Ibid.*, *Mental Health Statistics, 1960, op. cit.*, pp. 36-37.

TABLE 5-4

PATIENT MOVEMENT BY TYPE OF PUBLIC INSTITUTION, RATIO PER 100,000  
POPULATION, CANADA, 1955 AND 1960

	Mental Hospitals		Hospitals for Mentally Retarded		Psychiatric Units	
	1955	1960	1955	1960	1955	1960
Bed capacity .....	260	257	163	178	4	5
Average daily population.....	316	283	154	180	3	4
First admissions .....	62	72	18	19	32	37
Readmissions .....	30	46	1	2	14	18
Discharges .....	67	96	6	8	43	51
Deaths .....	18	21	2	3	0.26	0.18

Source: Department of National Health and Welfare, Mental Health Division, *Selected Mental Health Statistics, Canada, 1955-1960*, Ottawa: Queen's Printer, 1963, pp. 18-20.

## Conclusions

(i) Considerable change has occurred in the number and ratio of admission and separation events for Canadian psychiatric institutions. These changes are complex and involve such patient characteristics as diagnosis and age. It is difficult to determine the inter-relation of admissions, separations and patients under care.

(ii) In relation to population the frequency doubled for first admissions, increased five times for readmission-events, quadrupled for discharges, and patients in residence increased one-sixth between 1932 and 1960.

(iii) The annual excess of admissions over separations has been decreasing for functional psychoses. Patients with mental retardation formed one-half of the total increment during 1960.

(iv) Between 1951 and 1960 the number of residents in hospital at the end of the year increased 4 per cent in mental hospitals and 120 per cent in institutions for the mentally retarded. In relation to national population the average daily population decreased 10 per cent in mental hospitals, and increased 12 per cent in institutions for the mentally retarded between 1955 and 1960.



## ADMISSIONS TO PSYCHIATRIC INSTITUTIONS

This chapter deals with the patients admitted to psychiatric institutions as first admissions or readmissions. The characteristics described, and the statistics analyzed were those available in the publications of Dominion Bureau of Statistics, or derived from special tabulations provided to researchers by the Bureau.

### Introduction

#### *Definition*

First admission is currently defined by the Dominion Bureau of Statistics as "The admission of a person as an in-patient to a mental institution for the first time in his life".<sup>1</sup> In 1931, a first admission meant "... a patient admitted for the first time to an institution for mental diseases".<sup>2</sup>

Readmission is defined as: "The admission of a person as an in-patient who had been discharged from a mental institution anywhere, and who is not directly transferred from another mental institution".<sup>3</sup>

#### *Duplicated Reporting of First Admissions*

The above definitions are not uniformly followed throughout Canada or within individual provinces. In some provincial hospital systems a first admission refers to a patient first admitted to that particular provincial hospital system, irrespective of previous care in psychiatric units or mental hospitals in other provinces. Many psychiatric units consider as first admissions patients first admitted to their facilities regardless of previous psychiatric hospitalization elsewhere. Dominion Bureau of Statistics may make appropriate corrections on morbidity card reports for some patients transferred directly from one institution to another but such checks cannot be routinely made for all reported first admissions.

The possibility of duplicated reports of first admission for individuals, and inflated first admission rates has increased considerably in recent years. The number of psychiatric units submitting schedules to Dominion Bureau of

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<sup>1</sup>Dominion Bureau of Statistics, *Mental Health Statistics*, 1960, *op. cit.*, p. 9.

<sup>2</sup>Dominion Bureau of Statistics, *Seventh Census of Canada, 1931*, Vol. IX, *op. cit.*, p. 119.

<sup>3</sup>Dominion Bureau of Statistics, *Mental Health Statistics*, 1960, *op. cit.*, p. 9.

Statistics increased from one unit in 1953 to 32 units in 1960.<sup>4</sup> Nearly one-quarter (N=6,511) of schedule reported first admissions during 1960 were from psychiatric units.

For first admission data to be meaningful, general agreement and uniform application of the definition is required.

### *Relation of First Admissions to Incidence of Illness*

First admission rates are not the same as the incidence of psychiatric illness. The frequency of hospitalization among persons developing psychiatric illnesses for the first time varies by time, place and person. Increased rates of first admission are not generally the result of changes in the incidence of illness; rather, they reflect changes in the extent and type of hospital accommodation, alternatives to hospitalization, attitudes, social and demographic characteristics of the general population, and social pressure for hospitalization.<sup>5</sup>

### *Significance of First Admission Rates*

The rate of first admission is an index of *one aspect* of psychiatric morbidity in the community and provides a minimum estimate of the onset of "serious" psychiatric illnesses requiring hospital care.

"The very fact of admission to a mental hospital in itself may be defined as an index of the occurrence of a 'serious' disability associated with mental disorder. Thus studies of first admission rates specific for such variables as age, sex, color, marital status, etc., can provide useful data for planning and developing programs for the control of mental disorders and for research planning. They delineate population groups in which high rates of disability exist and indicate groups which should be singled out for special attention in the planning of community mental health services. They also suggest important variables to be considered in a search for causes and effects of mental diseases *per se* and of hospitalization. Indeed, studies that would illuminate the reasons for differential patterns of first admissions that exist in various communities would provide quite useful information."<sup>6</sup>

## **Trends in First Admissions, 1932-1960**

### *Number and Ratio of Patients*

The ratio of first admissions reported on schedules has more than doubled between 1932 and 1960 (73 to 164 per 100,000 population). While the ratios for both male and female first admissions reported on cards have increased, there has been a greater increase for females than for males. This is a reflection of changes in the type and usage of reporting facilities, rather than a change in the occurrence of psychiatric illnesses *per se*.

<sup>4</sup>Dominion Bureau of Statistics, *Mental Health Statistics*, 1960, *op. cit.*, p. 40.

<sup>5</sup>Wanklin, J. M., *et al.*, Factors influencing the rate of first admission to mental hospital, *J. nerv. ment. Dis.*, 121:103-116, 1955.

<sup>6</sup>American Public Health Association, *Mental Disorders, A Guide to Control Methods*, *op. cit.*, p. 104.

TABLE 6-1

FIRST ADMISSIONS, NUMBER AND RATE PER 100,000 POPULATION, CANADA,  
1932, 1941, 1951, 1956 AND 1960

	1932	1941	1951	1956	1960 <sup>1</sup>
Reported on schedules					
Number .....	7,628	7,902	13,152	25,097	26,935 <sup>1</sup>
Rate per 100,000 .....	73	69	94	156	151 <sup>1</sup>
Reported on cards					
Number .....	5,774	7,064	10,892	19,802	25,546
Rate per 100,000 .....					
Total .....	55	61	78	123	143
Male .....	66	67	84	127	146
Female .....	51	56	72	119	141
Card-reported					
Schedule-reported .....	76%	89%	83%	79%	95% <sup>1</sup>

<sup>1</sup> Adjustment for incomplete schedule-reporting from Quebec would give an estimated number of 29,200 and a ratio of 164 per 100,000 population and card reports for 87 per cent of schedule-reported admissions. (Dominion Bureau of Statistics, *Mental Health Statistics, 1960, op. cit.*, p. 15.)

Source: Dominion Bureau of Statistics, *Mental Health Statistics, 1960, op. cit.*, pp. 45, 51-53.

### Type of Institution

In 1932 schedules were submitted by 28 public "hospitals for the insane, feeble-minded and epileptic", three public "hospitals for the feeble-minded, 21 municipal institutions, four private institutions and two psychopathic hospitals of the Department of Pensions and National Health.<sup>7</sup> Twenty-nine of the 31 provincial institutions and one federal hospital submitted cards on individual patients. Seventy-six per cent of the first admissions reported on schedules were also card-reported.

By 1960 the bed capacity of institutions not reporting in any form was estimated as 1.7 per cent of the total bed capacity<sup>8</sup> and 95 per cent of the first admissions reported on schedules were also reported on individual morbidity cards.<sup>9-10</sup> One-half of the card-reported first admissions were from public mental hospitals, and one-third from public psychiatric units and psychiatric hospitals.<sup>11</sup>

### Provincial Differences

Between 1932 and 1951 the national schedule-reported first admission rate increased from 73 to 94 per 100,000. Manitoba and Quebec showed little change, Saskatchewan and British Columbia had marked increases, and the remaining

<sup>7</sup>Dominion Bureau of Statistics, *Annual Report Mental Institutions 1932, op. cit.*

<sup>8</sup>Dominion Bureau of Statistics, *Mental Health Statistics, 1960, op. cit.*, p. 11.

<sup>9</sup>*Ibid.*, p. 53.

<sup>10</sup>*Ibid.*, p. 15. About 2,000 first admissions were estimated to be unreported on schedules.

<sup>11</sup>Reporting from psychiatric units in Quebec was incomplete during 1960, 33 first admissions being reported.

provinces had moderate increases. The national ratio of first admissions during 1941 was slightly lower than during 1932. The relation of the Economic Depression and World War II to this decrease is difficult to assess.<sup>12</sup>

Schedule reports from psychiatric units have been included since 1953. Although the national rate remained relatively stable between 1956 and 1960,<sup>13</sup> the individual provinces have varied considerably in the amount and direction of change in their first admission rates.

TABLE 6-2

FIRST ADMISSIONS REPORTED ON SCHEDULES, RATE PER 100,000 POPULATION, CANADA AND PROVINCES, 1932, 1941, 1951, 1956 AND 1960

	1932	1941	1951	1956	1960
CANADA .....	73	69	94	156	151 <sup>1</sup>
Newfoundland, .....	--	--	48	40	77
Prince Edward Island, .....	51	65	91	147	202
Nova Scotia .....	58	81	98	169	142
New Brunswick .....	33	68	69	132	215
Quebec .....	72	63	75	168	107
Ontario .....	89	73	96	142	162
Manitoba .....	75	59	76	121	177
Saskatchewan .....	50	63	124	156	177
Alberta .....	57	57	69	151	181
British Columbia, .....	78	92	190	239	197

<sup>1</sup>See footnote, Table 6-1.

Source: Dominion Bureau of Statistics, *Mental Health Statistics, 1960*, op. cit., p. 45.

TABLE 6-3

FIRST ADMISSIONS TO PSYCHIATRIC INSTITUTIONS, BY SEX, AND AGE GROUP, RATE PER 100,000 POPULATION, CANADA, 1932, 1941, 1951, 1956 AND 1960

Age Group	1932	1941	1951	1956	1960
M A L E					
All ages .....	66	67	84	127	146
0 - 9 .....	} 29	} 30	23	19	22
10 - 19 .....			51	62	76
20 - 29 .....	74	78	97	155	174
30 - 39 .....	95	81	95	176	218
40 - 49 .....	86	82	95	175	215
50 - 59 .....	85	78	106	189	199
60 - 69 .....	101	98	122	185	217
70 - 79 .....	} 155	} 190	225	283	299
80 - 89 .....			472	556	684
90 plus .....			346	587	909

<sup>12</sup>First admission rates for males aged 25-65 were less during 1943-1947 than during 1933-1937. Fisher, J. W., and Stogdill, C. E., *Mental illness in Canada as reflected by mental hospital admissions, 1932-1947*. *Can. J. publ. Hlth.* 43:336-346, 1952.

<sup>13</sup>Dominion Bureau of Statistics, *Mental Health Statistics, 1960*, op. cit., p. 15.



TABLE 6-3 (concluded)

Age Group	1932	1941	1951	1956	1960
FEMALE					
All ages .....	51	56	72	119	141
0 - 9 .....	}19	}21	13	15	19
10 - 19 .....			41	54	67
20 - 29 .....	62	61	80	144	181
30 - 39 .....	72	75	101	175	219
40 - 49 .....	72	70	97	177	197
50 - 59 .....	74	78	93	168	203
60 - 69 .....	91	92	104	181	188
70 - 79 .....	}125	}147	156	234	284
80 - 89 .....			265	434	531
90 plus .....			325	505	670

Source: Dominion Bureau of Statistics, *Mental Health Statistics, 1960, op. cit.*, p. 53.

Age-sex Specific Rates for All Diagnoses

Changes in age-sex specific rates between 1932 and 1960 must be assessed from card-reported data, which increased from 76 per cent of schedule reported admissions in 1932 to 95 per cent in 1960. Rates of first admission have increased nationally for all age groups, and particularly for the younger and older segments of the population.

Age-sex Specific Rates for Psychoses

Between 1932 and 1960, the card-reported rates of all first admissions increased 120 per cent for males from 66 to 146 per 100,000, and 176 per cent for females from 51 to 141 per 100,000. During the same period, the equivalent rates for all psychoses increased 38 per cent for males from 51 to 70 per 100,000, and 78 per cent for females from 41 to 74 per 100,000. (See Appendix 6-1). Increased first admission rates have occurred to a lesser degree for psychoses than for other diagnostic groups. First admission rates for psychoses have shown the greatest increase among the aged.

Provincial Differences in First Admissions

First Admissions, 1950-1952

Gregory analyzed provincial differences in rates of first admission for 1950-1952. The institutions were those operated by federal or provincial authorities, and no psychiatric units in general hospitals were included. Gregory concluded that differences in mental hospital first admission rates for the Canadian provinces during the period 1950-1952 were less indicative of the incidence of mental disorders than of such factors as social judgment regarding what constitutes mental abnormality, social demand for mental hospital care, availability of mental hospital accommodation or of alternative psychiatric facilities, and variations in diagnostic criteria.<sup>14</sup> (See Appendix 6-2).

<sup>14</sup>Gregory, I., Factors influencing first admission rates to Canadian mental hospitals. II. An analysis of provincial differences, *Canad. psychiat. Ass. J.* 4: 51-60, 1959.

First admission rates for psychoses of senium were higher from towns and villages over 1,000 population than from rural areas, and this was attributed to a tendency to hospitalize cases whose symptoms would be tolerated in a rural community, and the factor of distance from mental hospital.<sup>15,16</sup>

*Diagnostic Distribution of First Admissions, 1960*

There is considerable provincial variation in the diagnostic composition of first admissions. This reflects provincial differences in the type of institution available, the extent of reporting, differences in diagnostic usage and administrative policies regarding admission for patients with senile psychoses or mental retardation. Wide provincial deviations from the national ratios for various diagnostic classes occur.

TABLE 6-4  
FIRST ADMISSIONS BY DIAGNOSTIC GROUP, RATE PER 100,000 POPULATION,  
AND PROVINCE WITH HIGHEST RATIO, CANADA, 1960

	Canada		Province with Highest Ratio	
	Male	Female	Male	Female
ALL ADMISSIONS .....	145.9	140.9	P.E.I. - 245.2	B.C. - 202.1
Functional psychoses .....	41.3	50.2	Man. - 58.3	B.C. - 67.6
Schizophrenia and paranoid psychoses .....	28.4	27.3	Man. - 42.7	B.C. - 44.4
Affective psychoses.....	12.9	22.9	Sask. - 18.4	Sask. - 25.3
Psychoses of senium .....	15.0	14.9	Sask. - 35.9	Sask. - 26.6
Alcoholic psychoses .....	7.1	1.7	B.C. - 22.0	B.C. - 6.5
Alcoholism.....	15.7	3.3	P.E.I. - 82.4	P.E.I. - 15.7
Psychoneuroses .....	24.5	38.9	B.C. - 36.3	Man. - 68.5
Mental retardation.....	12.2	9.7	P.E.I. - 30.7	Alta. 14.9

Source: Dominion Bureau of Statistics, *Mental Health Statistics, 1960, op. cit.*, pp. 68-69.

*Legal Method of Admission*

During the early 1900's legally established requirements for admission to mental hospitals consisted of a court order supported by medical certification.<sup>17</sup> Currently, there are a number of legal methods by which the patient may be admitted to a psychiatric institution. Voluntary admissions to most psychiatric divisions of general hospitals involve the patient signing the same consent form that is used throughout the remainder of the hospital. In other psychiatric institutions application for voluntary admission must also be endorsed by a medical practitioner. Voluntary patients may normally leave upon giving prior notification. Other forms of admission include admission by medical certificate, with or without judicial order.

<sup>15</sup>Gregory, I., Factors influencing first admission rates to Canadian mental hospitals. III. An analysis by education, marital status, country of birth, religion and rural-urban residence, 1950-1952, *Canad. psychiat. Ass. J.* 4: 133-151, 1959.

<sup>16</sup>Other studies have also described the higher first admission rates for the aged from urban areas. Buck, Carol, et al., An analysis of regional differences in mental illness, *J. nerv. ment. Dis.* 122: 73-79, 1955. Person, P.H., Geographic variation in first admission rates to a state mental hospital, *Publ. Hlth Rep., Wash.* 77: 719-731, 1962.

<sup>17</sup>Department of National Health and Welfare, *Mental Health Services in Canada, op. cit.*, p. 20.

TABLE 6-5  
DIAGNOSTIC DISTRIBUTION OF FIRST ADMISSIONS, CANADA AND PROVINCES, 1960

	Total Admissions		All Psychoses		Schizophrenia and Paranoid Psychoses		Affective Psychoses		Psychoses of Senium		Psychoneuroses		Mental Retardation	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
CANADA.....	25,546	100	12,830	50	4,966	19	3,170	12	2,661	10	5,624	22	1,961	8
Newfoundland.....	355	100	253	71	106	30	77	22	36	10	44	12	18	5
Prince Edward Island...	208	100	78	38	24	12	20	10	24	12	35	17	23	11
Nova Scotia .....	911	100	444	49	239	26	93	10	44	5	111	12	59	7
New Brunswick .....	872	100	434	50	136	16	107	12	155	18	164	19	54	6
Quebec .....	5,450	100	2,982	55	1,188	22	852	16	477	9	825	15	678	12
Ontario .....	9,730	100	4,685	48	1,703	18	1,156	12	1,108	11	2,649	27	599	6
Manitoba .....	1,589	100	809	51	365	23	216	14	99	6	462	29	56	4
Saskatchewan.....	1,611	100	838	52	262	16	198	12	286	18	307	19	86	5
Alberta .....	1,654	100	882	53	314	19	177	11	265	16	241	15	176	11
British Columbia .....	3,166	100	1,425	45	629	20	274	9	167	5	786	25	212	7

Source: Dominion Bureau of Statistics, *Mental Health Statistics, 1960*, op. cit., p. 65.

The number and proportion of all voluntary admissions is alleged to be, to some extent, an index of the acceptance of and attitudes toward psychiatric treatment by the community.<sup>18</sup> During the 1930's less than 5 per cent of first admissions were admitted on a voluntary basis. Between 1946 and 1951, this proportion had increased from 5.9 per cent to 11.5 per cent<sup>19</sup> for first admissions to card-reporting institutions. Between 1956 and 1960, the proportion of voluntary first admissions to public mental hospitals increased from 11.2 per cent to 17.0 per cent.<sup>20</sup> With the increasing proportion of non-psychotic admissions to mental hospitals it would be useful to have tabulations showing the method of admission classified by diagnostic group and type of institution.

### Factors Affecting Readmission

The number of readmissions is affected by such factors as:

Insufficient hospital planning for rehabilitation in the community;

Availability of after-care services, or alternatives to readmission for former patients in the community;

Hospital criteria and policies for discharge. Discharge may occur at an earlier stage of recovery in order to reduce the disability of continued hospitalization. For an individual, over a period of time, the total amount of hospital stay may be reduced by shorter, intermittent stays;<sup>21</sup>

The increasing number and longevity of former patients in the community;

Attitudes of former patients regarding return to the hospital. (There is a higher proportion of voluntary admission among readmissions than among first admissions);<sup>22</sup>

The administrative policies of hospitals regarding the admission or readmission of certain diagnostic groups.<sup>23</sup>

It is not possible to determine whether the increasing number of readmissions represents intermittent hospitalizations for patients who previously would have remained continuously hospitalized, or the results of various inadequacies such as insufficient hospital treatment and planning for rehabilitation and lack of community alternatives to hospital care.

<sup>18</sup>Dominion Bureau of Statistics, *Mental Health Statistics*, 1955, Ottawa: Queen's Printer, 1957, p. 34.

<sup>19</sup>Department of National Health and Welfare, *Mental Health Services in Canada*, 1954, *op. cit.*, p. 24.

<sup>20</sup>Dominion Bureau of Statistics, *Mental Health Statistics*, 1956, *op. cit.*, p. 49, and 1960, *op. cit.*, p. 58.

<sup>21</sup>Department of National Health and Welfare, *National Health Grants, 1948-1961*, *op. cit.*

<sup>22</sup>Dominion Bureau of Statistics, *Mental Health Statistics*, 1960, *op. cit.*, pp. 58 and 88.

<sup>23</sup>The number of readmission events diagnosed as alcoholism or alcoholic psychoses, has increased markedly. During 1956 there were 97 readmission events for persons diagnosed as alcoholism, who had 35 or more previous admissions each (DBS *Mental Health Statistics*, 1956, *op. cit.*, p. 79). It is not known how many individuals were represented by these 97 readmission events. Among readmissions during 1958 (*op. cit.*, p. 74), the mean number of previous admissions was 8.5 for those diagnosed as alcoholism, 5.3 for drug addiction, 3.3 for anxiety neuroses, and between 2 and 3 for manic depressive psychosis and for most forms of psychoneurosis.



Trends in Readmissions, 1932-1960

Number of Readmissions

The total number of readmissions reported on schedules increased about 9 times, 1,828 in 1932 to 16,186 in 1960. The number of readmissions increased more rapidly than first admissions, so that readmissions formed 19.3 per cent of all admissions in 1932 and 37.5 per cent in 1960.

TABLE 6-6  
READMISSION-EVENTS AS PERCENTAGE OF ADMISSIONS, CANADA, 1932, 1941, 1951, 1956 AND 1960

	1932	1941	1951	1956	1960
All admissions .....	9,456	10,303	17,743	36,438	43,121
Readmissions .....	1,828	2,401	4,591	11,341	16,186
Readmissions .....	19.3%	23.3%	25.9%	31.1%	37.5%
All admissions .....					

Source: Dominion Bureau of Statistics, *Mental Health Statistics, 1960, op.cit., pp. 44, 46.*

Although the total number of card-reported readmission-events increased over four times between 1951 and 1960, the number of individuals reported as having their second hospitalization increased about three times. Therefore, the increasing number of readmission-events also reflects an increase in the number of events per individual as well as the number of individuals being readmitted.

TABLE 6-7  
PERCENTAGE OF READMISSION-EVENTS, REPORTED AS SECOND HOSPITALIZATION, CANADA, 1951, 1956 AND 1960

		1951	1956	1960
Total number of readmission-events = 100% .....		3,572	10,133	15,685
Events reported as second hospitalization	No =	2,162	4,679	6,695
	%	60%	46%	43%

Source: Dominion Bureau of Statistics, *Mental Institutions, 1951, op. cit., p. 102; ibid., Mental Health Statistics, 1956, p. 90; 1960, p. 88.*

This decreasing proportion of readmission-events being reported as second hospitalizations is not solely due to changes in the types of institution reporting. This ratio was 49 per cent for public mental hospitals in 1960 in comparison to 43 per cent for all institutions.<sup>24</sup>

Diagnostic Distribution of Readmissions

The number of readmission-events has not increased to the same extent for all diagnostic groups. Between 1932 and 1960 the number of readmission-events

<sup>24</sup>Dominion Bureau of Statistics, *Mental Health Statistics, 1960, op. cit., p. 89.*

for affective psychoses increased to a lesser degree and those for alcoholic psychoses have increased to a greater degree than all diagnoses combined.

Between 1956 and 1960 readmission-events for schizophrenia and paranoid psychoses increased by 80 per cent, while those for affective psychoses increased 30 per cent.

TABLE 6-8  
DIAGNOSTIC DISTRIBUTION OF READMISSION-EVENTS,  
CANADA, 1932, 1941, 1951, 1956 AND 1960

	Number of Events				
	1932	1941	1951	1956	1960
ALL DIAGNOSES.....	1,399	2,033	3,572	10,133	15,685
Schizophrenia and paranoid psychoses .....	430	746	1,224	2,719	4,832
Affective psychoses .....	442	617	1,045	2,248	2,974
Alcoholic psychoses .....	44	46	72	254	808
Neuroses .....	34	50	223	1,501	2,653
Alcoholism .....	—	—	229	1,700	1,750

Source: Dominion Bureau of Statistics, *Annual Report, Mental Institutions, 1932, op. cit.*; *Tenth Annual Report of Mental Institutions, 1941, op. cit.*; *Mental Institutions, 1951, op. cit.*; *Mental Health Statistics, 1956, and 1960, op. cit.*

### Provincial Differences in Readmissions, 1960

The ratio of readmission-events per 100,000 population varied provincially from 55 to 266, with a national mean of 88, for males, and from 46 to 168, with a national mean of 88, for females.

TABLE 6-9  
READMISSION-EVENTS, RATIO PER 100,000 POPULATION, BY SEX,  
CANADA AND PROVINCES, 1960

Province	Male	Female
CANADA .....	88	88
Newfoundland. ....	88	76
Prince Edward Island.....	266	114
Nova Scotia.....	113	75
New Brunswick .....	117	82
Quebec.....	55	46
Ontario.....	82	93
Manitoba.....	93	124
Saskatchewan.....	121	133
Alberta .....	82	87
British Columbia.....	168	168

Source: Dominion Bureau of Statistics, *Mental Health Statistics, 1960, op. cit.*, p. 85.

Relation of Personal Characteristics to Readmission

Since an individual can have more than one readmission, any study of personal characteristics should be based on individuals, rather than on readmission-events. The number and personal characteristics of unduplicated individuals represented by readmission-events is not available in DBS publications. Tabulations for individuals reported as having a second hospitalization would provide better data for assessing some of the factors involved in readmission.

Interval Outside Hospital for Readmissions

Information on the interval between readmission and previous discharge was tabulated by DBS for 1952 only. Almost one-tenth had been discharged less than one month before their readmission, and 38.3 per cent less than one year previously. Female psychotics and psychoneurotics tended to be readmitted sooner than males.<sup>25</sup>

TABLE 6-10  
MEDIAN INTERVAL BETWEEN DISCHARGE AND READMISSION  
FOR READMISSIONS, BY DIAGNOSTIC GROUP, CANADA, 1952

Diagnostic Group	Number of Events	Median Months Elapsed between Discharge and Readmission
ALL DIAGNOSES .....	4,162	19.8
Psychoses .....	3,161	22.4
Psychoneuroses .....	267	10.7
Disorders of character, behaviour and intelligence .....	700	11.9

Source: Dominion Bureau of Statistics, *Mental Institutions 1952*,  
Ottawa: Queen's Printer, 1954, pp. 108-109.

Twelve per cent of the readmission-events during 1960 were subsequent to a previous admission during the *same* calendar year.<sup>26</sup> The interval between discharge and readmission has been coded on DBS punch card summaries since 1959 but analyses of this useful variable have not been published.<sup>27</sup>

Duration of Hospital Stay for Readmissions

Among patients discharged during 1951 the duration of stay was less for first admissions than for patients having their second to fourth admissions. "... 50% of first admissions were discharged in 2.8 months; second admissions in 3.2 months; third, 3.4; fourth 2.9; fifth 2.8; sixth and later 2.7."<sup>28</sup>

<sup>25</sup> Dominion Bureau of Statistics, *Mental Institutions, 1952*, Ottawa: Queen's Printer, 1954, p. 78.  
<sup>26</sup> Dominion Bureau of Statistics, *Mental Health Statistics, 1960*, op. cit., p. 24.  
<sup>27</sup> It is presently feasible for Dominion Bureau of Statistics to prepare tabulations showing the personal and diagnostic characteristics of persons having their second hospitalization, categorized by interval between hospitalizations. These tabulations should be specific for various demographic and diagnostic groups as well as type of institution. For better understanding of the course of hospital care, longitudinal studies of first admissions are essential to assess the frequency of subsequent admissions and the relationship between events and individuals; the interval between discharge and admission; and the amount of hospital utilization over a period of time.  
<sup>28</sup> Dominion Bureau of Statistics, *Mental Institutions 1951*, op. cit., p. 107.

The durations of stay apply to those discharged and it is not known whether the proportion of individuals leaving hospital in a certain period of time is higher for first admissions than for readmissions.

### **Conclusions**

(i) First admissions are not uniformly defined throughout Canada. General agreement and uniform application of a definition is required.

(ii) Changes in first admission rates do not indicate changes in the occurrence of illness, but reflect hospital and community differences. Between 1932 and 1960 first admission rates have increased to a lesser extent for psychoses than for the other illnesses.

(iii) Dominion Bureau of Statistics publications do not have adequate tabulations for assessing the factors involved in the wide provincial differences in rates of first admission. Tabulations must be provided which are specific by type of institution.

(iv) In 1960 less than one-fifth of first admissions to mental hospitals were voluntary. More detailed analyses of method of admission are required.

(v) Marked increases in the number of readmission-events have occurred, both in terms of the number of events per individual as well as the number of individuals being readmitted. Better tabulations of existing data are necessary.

(vi) Longitudinal studies of first admissions are essential for establishing the relations between the rate of return, the number of readmission-events, and the total amount of hospital care over a period of time.



## SEPARATIONS FROM PSYCHIATRIC INSTITUTIONS

### Definition of Separations

Separations include patients who have left the hospital by discharge, death, or transfer to another hospital.

Discharge refers to a patient released from the supervision of the hospital authorities. Patients on probation or boarded out are not considered as discharges.<sup>1</sup> A person on probation remains legally under the control of the hospital and may be returned to institutional care, if necessary.<sup>2</sup> When the period of probation ends (usually within six months) the patient is discharged. Persons admitted on a voluntary basis may be discharged upon request in some psychiatric institutions, or within three to fourteen days of giving written notice in other institutions. Non-voluntary patients may be legally compelled to remain in hospital. Patients leaving without medical approval are termed "discharge against advice".

Death refers to a patient who dies in the institution, or while boarding out or on parole or while otherwise on the books of the institution.<sup>3</sup> As noted by Thurnam, the definition is "altogether unsusceptible of misapplication".<sup>4</sup> In contrast to admissions and discharges, the number of deaths represents unduplicated individuals for whom the event will not recur.

Transfer refers to a patient who is transferred out from the hospital to another hospital for mental diseases, wherever situated.<sup>5</sup> Statistical data on transfers are difficult to interpret because patients transferred from a non-reporting institution to a reporting institution are classed as readmissions by Dominion Bureau of Statistics; while patients transferred to non-card-reporting institutions from reporting institutions are classed as discharges.<sup>6,7</sup>

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<sup>1</sup>Dominion Bureau of Statistics, *Mental Statistics Handbook*, *op. cit.*, p. 28.

<sup>2</sup>Department of National Health and Welfare, Research and Statistics Division, *Mental Health Legislation in Canada*, Health Care Series, Memorandum No. 15, Ottawa: Queen's Printer, 1960, p. 19.

<sup>3</sup>Dominion Bureau of Statistics, *Mental Statistics Handbook*, *op. cit.*, p. 28.

<sup>4</sup>Thurnam, J., *op. cit.*

<sup>5</sup>Dominion Bureau of Statistics, *Mental Statistics Handbook*, *op. cit.*, p. 28.

<sup>6</sup>Dominion Bureau of Statistics, *Mental Health Statistics 1960*, *op. cit.*, pp. 9-10.

<sup>7</sup>For a patient who has been transferred one or more times, the length of time on books is calculated from the date of initial admission; and duration of hospital care for these patients (when separated) is the sum of the various lengths of care. The patient's stay is considered as one period of hospital care rather than of separate admissions and separations.

## Significance of Discharges in Evaluating Hospital Results

Various characteristics of discharges have been used to indicate the effectiveness of hospital care. Many of these indices are unsatisfactory.

### *Degree of Social Adjustment of Discharges*

Although there are no reliable or valid methods in general use for assessing the degree of psychiatric disability,<sup>8</sup> Dominion Bureau of Statistics classifies the patient's condition on discharge in relation to the degree of social adjustment which obtained before the illness.

"...For purposes of statistical comparability, use the following definitions..."

*"Recovered*—A restoration to that degree of social adjustment which obtained before the illness.

*"Much improved*—A near restoration to that degree of social adjustment which obtained before the illness.

*"Improved*—A partial restoration to that degree of social adjustment which obtained before the illness.

*"Unimproved*—No restoration to that degree of social adjustment which obtained before the illness."<sup>9</sup>

The current definition of recovery is similar to those proposed in the previous century.

"The proof that a man living in an asylum has completely recovered, and that no residue and no weakening of the intellect remain, will be obtained if the man can return to the former condition, to his work and his vocation, and is able to perform his duties as before his illness."<sup>10</sup>

"The term recovered as applied to those cases only in which the patient is so far restored as to appear capable of performing, with propriety, the duties belonging to his social and civil position..."<sup>11</sup>

### *Number of Discharges*

"Except as a point of general interest, however, little is to be gained by discussing aggregate numbers of discharges... Discharge totals are to a great extent a function of admission totals; as the numbers entering institutions rise the numbers leaving also rise."<sup>12</sup>

### *Average Stay<sup>13</sup> of Discharges*

"...averages do not adequately describe hospital stay experience. The mean stay of discharged cases tends to be influenced by the number of long-term patients who

<sup>8</sup> American Public Health Association: *Mental Disorders, A Guide to Control Methods*, *op. cit.*, pp. 98-112.

<sup>9</sup> Dominion Bureau of Statistics, *Mental Statistics Handbook*, *op. cit.*, p. 30.

<sup>10</sup> Tuke, D., *A Dictionary of Psychological Medicine*, London: J. & A. Churchill, 1892, p. 382.

<sup>11</sup> Thurnam, J., *op. cit.*, p. 3.

<sup>12</sup> Dominion Bureau of Statistics, *Mental Health Statistics*, 1956, *op. cit.*, p. 113.

<sup>13</sup> Even the calculation of length of stay is not uniform throughout Canada. "For eight provinces hospital stay is recorded as the interval between the patient's latest admission (other than by a direct transfer) to his finally leaving hospital, i.e., including intermediate periods of absence, such as temporary home leave, trial visits, escape, or unsuccessful probation, but excluding the final successful probation period. For Quebec and Ontario the actual number of days in hospital is taken." Dominion Bureau of Statistics, *Mental Health Statistics*, 1960, *op. cit.*, p. 26.

were discharged during a year. The average increases when more long-term patients are discharged in one year than in the year before. This does not necessarily reflect less effective treatment; on the contrary, it might suggest that treatment of an increased number of chronic patients was successfully terminated than during the previous year."<sup>14</sup>

"...a relative increase of long-term patients among discharges evidently influences the mean considerably, and the mean length of stay is therefore not a reliable measure of treatment efficacy."<sup>15</sup>

### *Distribution of Various Lengths of Stay among Discharges*

"In order to describe stay experience more adequately, frequency distributions may be constructed either as diagnostic comparisons or as time series...statistics show that stay periods have generally been decreasing. They do not prove, however, that the total average of hospital stay of patients has decreased, since the tabulations were derived from the latest stay periods of discharged cases and not from the total hospital experience of patients."<sup>16</sup>

### *Relation of Discharges to Admissions, or Patients on Books*

More satisfactory methods of analysis involve considering discharges in relation to admissions or patients on books.

Tabulations showing the number of patients remaining at the end of the year from those admitted during the year have been published by the Ontario Mental Health Branch (see Table 12-8). Similar tabulation can be derived for Canada for larger periods of follow-up (see Chapter 10).

Net release stay—specific rates per 1,000 average resident patient population, described by Kramer,<sup>17</sup> could be calculated by DBS with the data available to them, but have not been published in any of the Annual Reports.

Actuarial analyses provide better estimates of the degree of retention and separation after various lengths of hospital stay, and of the amount of hospital care required for a group of admissions. Such analyses require data on the characteristics of the population remaining under hospital care, as well as the characteristics of discharges and deaths.

Up to the end of 1955, the characteristics of the patients remaining under hospital care were not known.

"We should also point out that we cannot at present compute rates of discharge for particular patient characteristics such as age and sex because the denominator in the calculation is lacking. This denominator, representing the "population at risk" of discharge—i.e.—the patients on books, classified by corresponding characteristics, is not yet available."<sup>18</sup>

<sup>14</sup>Dominion Bureau of Statistics, *Mental Health Statistics*, 1957, Ottawa: Queen's Printer, 1959, p. 105.

<sup>15</sup>Dominion Bureau of Statistics, *Mental Health Statistics*, 1958, Ottawa: Queen's Printer, 1960, p. 99.

<sup>16</sup>*Ibid.*, 1957, p. 106.

<sup>17</sup>Kramer, M., Problems in the interpretation of trends in the population movement of the public mental hospitals, *Am. J. publ. Hlth.* 48:1003-1019, 1958.

<sup>18</sup>Dominion Bureau of Statistics, *Mental Health Statistics*, 1956, *op. cit.*, p. 113.

Such rates were published by DBS for certain diagnostic classes for the years 1956-1958.

"For 1960 and the following years, however, it will be possible to calculate rates and probabilities with greater specificity as to duration intervals after admission, sex, order of admission (first admission or readmission), condition on discharge, and type of institution."<sup>19</sup>

The rates were derived from tabulations and separations that are published in *Mental Health Statistics* and the *Supplement: Patients in Institutions* for the years 1955-1958. The duration of hospital stay of discharges and deaths *excludes* the final probation period; while the time since admission for patients on the books includes some portion of the final probation period for patients outside of institution but who remain on the books. Because of this discrepancy in definitions of time since admission for separations and patients on the books the ratios in this DBS publication are *approximations or estimates* of ratios which would be derived from data with uniform definitions.

### Lack of Mortality Data for Patients in Psychiatric Institutions

Death rates for mental hospitals must be adjusted for age, length of stay, and diagnosis to provide a more meaningful presentation of the factors associated with death in these institutions. Studies of trends in such mortality rates can be helpful in assessing the quality of medical and nursing care provided for the patients.<sup>20</sup>

Although data were available on the age-sex group, length of stay and diagnosis of patients on books during 1955-1960, death rates specific for age and length of stay have not been published. Death rates by diagnosis and length of stay, prepared for the years 1956-1958, demonstrated the rapid increase in mortality with prolonged hospitalization.

TABLE 7-1

DEATH RATE<sup>1</sup> BY DURATION OF STAY FOR VARIOUS DIAGNOSTIC GROUPS,  
CANADA, 1958

Duration Interval	Schizophrenia	Psychoses of Senium	Mental Retardation
0 - 1 month .....	.002	.127	.010
1 - 4 months .....	.005	.185	.012
4 - 8 months .....	.002	.168	.010
8 - 12 months .....	.004	.130	.009
1 - 2 years .....	.016	.286	.014
2 - 3 years .....	.017	.264	.028
3 - 5 years .....	.034	.445	.025
5 - 10 years .....	.091	.672	.083

<sup>1</sup>Death rates are absolute rates, representing the proportion of patients, at beginning of duration interval, who would have died within the duration interval if there had been no discharges.

Source: Dominion Bureau of Statistics, *Rates and Probabilities of Separation from Mental Institution* (1956-1958), *op. cit.*

<sup>19</sup>Dominion Bureau of Statistics, *Rates and Probabilities of Separation from Mental Institutions* (1956-1958), Ottawa: Queen's Printer, 1960.

<sup>20</sup>American Public Health Association, *Mental Disorders, A Guide to Control Methods*, *op. cit.*, p. 120.



Some of the conclusions in DBS publications, regarding deaths in institutions, are of questionable validity:

"The overall average (hospital stay at death) was 87.1 months—emphasizing the fact that mental illness is truly a chronic condition."<sup>21</sup>

Deaths in institutions represent the admissions who have not been discharged. To estimate the duration of illness on the basis of the length of hospitalization at death is fallacious.

"Mental illness is not, per se, a 'killing' condition. The median age at time of death of patients who died in mental hospitals has increased at almost the same rate and at almost the same level as that for the general population."<sup>22</sup>

It is not valid to evaluate the mortality associated with hospitalized mental illness on the basis of the median age of deaths in mental hospitals.

Trends in Discharges and Deaths, 1932-1960

Number of Discharges, and Deaths

The number of schedule-reported discharges increased from 5,138 in 1932 to 36,768 in 1960, concomitant with an increasing number of admissions.

TABLE 7-2  
DISCHARGES BY DISTRIBUTION OF STAY, AND MEAN STAY, CANADA, 1932, 1941, 1951, 1956 AND 1960

	1932	1941	1951	1956	1960
ALL DISCHARGES .....	3,384 <sup>1</sup>	5,410	9,939	24,955	34,981
Under 4 months .....	1,543	2,202	6,174	19,839	28,495
4 months — 1 year .....	1,012	1,575	2,188	2,928	3,780
1 — 2 years .....	384	704	620	892	1,151
2 — 5 years .....	259	544	487	684	742
5 + years .....	164	385	470	612	813
Mean stay (months)	. .	18	13.2	7.1	6.3

<sup>1</sup> Includes 22 patients with unstated length of stay.

Source: Dominion Bureau of Statistics, *Annual Report, Mental Institutions 1932, op. cit., Tenth Annual Report of Mental Institutions, 1941, op. cit., Mental Institutions, 1951, op. cit., Mental Health Statistics, 1956 and 1960, op. cit.*

The number of deaths in psychiatric institutions doubled from 2,347 in 1932 to 4,512 in 1960, and the ratio per 100,000 general population increased from 22 to 25. The proportion of patients over 60 years among the deaths has progressively increased from less than one-half (45.5 per cent) in 1932 to over three-quarters (78.5 per cent) in 1960.

<sup>21</sup>Dominion Bureau of Statistics, *Mental Health Statistics, 1955, op. cit., p. 135; and also 1956, p. 141.*

<sup>22</sup>Dominion Bureau of Statistics, *Mental Health Statistics, 1954, op. cit., p. 105.*

**TABLE 7-3**  
**DEATHS BY DISTRIBUTION OF STAY AND MEAN STAY, CANADA, 1932, 1941,**  
**1951, 1956 AND 1960**

	1932	1941	1951	1956	1960 <sup>1</sup>
TOTAL (schedule-reported) . . . . .	2,347	2,628	3,190	3,724	4,512
TOTAL (card-reported)					
Number . . . . .	2,034	2,412	2,980	3,423	4,285
Per cent . . . . .	100.0	100.0	100.0	100.0	100.0
<i>Aged 60 and over</i>					
Number . . . . .	925	1,288	2,016	2,620	3,365
Per cent . . . . .	45.5	53.4	67.7	76.5	78.5
<i>Duration hospitalization</i> <i>before death— under 1 year</i>					
Number . . . . .	926	932	1,167	1,404	1,841
Per cent . . . . .	45.5	38.6	39.2	41.0	42.9
<i>5 years and over</i>					
Number . . . . .	598	1,509	1,307	1,163	1,432
Per cent . . . . .	29.4	37.4	37.0	34.0	33.4
<i>Mean length of hospitalization</i> . . . . .	..	6.7	7.6	7.4	7.6
		years	years	years	years

<sup>1</sup>Data for Quebec incomplete. Source: Dominion Bureau of Statistics, *Mental Health Statistics*, 1960, op. cit., pp. 47, 123, 133;

*Ibid.*, *Tenth Annual Report of Mental Institutions*, 1941, op. cit., pp. 72-74;

*Ibid.*, *Annual Report Mental Institutions* 1932, op. cit., pp. 63-64.

*Ibid.*, *Mental Institutions* 1951, op. cit., pp. 166-167;

*Ibid.*, *Mental Health Statistics*, 1956, op. cit., pp. 153, 156.

### *Length of Hospitalization of Discharges, and Deaths*

Discharges within four months of admission have shown a greater increase between 1932 and 1951 than discharges after four months. The large increase of discharges within four months for the years 1956-1960 is in large part due to discharges from psychiatric units of general hospitals. The number of discharges with four or more months of care increased three and a half times from 1,841 in 1932 to 6,484 in 1960.

The mean stay of discharges decreased from 18 months in 1941 to 6.3 months in 1960, but there were large differences in the personal and diagnostic characteristics of discharges for these years as well as in the characteristics of reporting institutions.

The duration of hospital care for deaths changed relatively little between 1941 and 1960, 6.7 and 7.6 years respectively. Similarly, the distribution of length of stay changed little between 1941 and 1960; about two-fifths of deaths occurred within one year of admission, and one-third occurred after five years of hospital care.

Deaths occurring within one year of admission were largely in those diagnosed as psychoses of the senium, while those after five years of hospital care occurred in patients diagnosed as schizophrenia, and mental retardation (see Appendix 7-1).

Nearly one-half of all separations after one year of hospital care were deaths during 1956-1960.

TABLE 7-4  
SEPARATIONS AFTER ONE YEAR OF HOSPITAL STAY, 1956-1960

Discharges.....	12,475 = 52.0%
Deaths .....	11,512 = 48.0%
Total.....	23,987 = 100.0%

Source: Appendices 7 - 1, 7 - 2.

Provincial Differences in Mean Stay of Discharges, 1960

The mean stay for all discharges during 1960 averaged 6.3 months nationally, ranging from 4.4 months in British Columbia to 7.8 months in Saskatchewan. Mean stay of discharges from various types of institutions varied from 0.7 months in public psychiatric units to 40.5 months for discharges from public hospitals for mentally defectives.<sup>23</sup> The mean stay of discharges from public mental hospitals varied widely between provinces, and between 1956 and 1960.

TABLE 7-5  
DISCHARGES FROM PUBLIC MENTAL HOSPITALS, MEAN DURATION OF STAY (DAYS), CANADA AND PROVINCES, 1956 AND 1960

	1956	1960
CANADA .....	386	322
Newfoundland .....	483	195
Prince Edward Island .....	533	195
Nova Scotia .....	158	207
New Brunswick .....	243	161
Quebec .....	452	478
Ontario .....	348	310
Manitoba .....	367	548
Saskatchewan .....	366	383
Alberta .....	612	243
British Columbia.....	449	356

Source: Dominion Bureau of Statistics, *Mental Health Statistics*, 1956, *op. cit.*, p. 135; and 1960, pp. 115-116.

The mean stay is biased by extreme values. For 1960, the 368 patients discharged after 10 years of hospital care had at least 44,000 months of hospital care. This was three times greater than the hospital care of the 15,694 cases who were discharged within one month of admission.<sup>24</sup>

<sup>23</sup> Dominion Bureau of Statistics, *Mental Health Statistics*, 1960, *op. cit.*, pp. 115-116.

<sup>24</sup> Dominion Bureau of Statistics, *Mental Health Statistics*, 1960, *op. cit.*, p. 113.

## Discharges against Advice

The proportion of discharges leaving against medical advice decreased from 5.1 per cent (N=1,257) in 1956 to 4 per cent (N=1,408) in 1960. In 1960, 4 per cent of discharges from public mental hospitals and 3 per cent of discharges from public psychiatric units<sup>25</sup> left against medical advice.

The relation of discharges against advice to voluntary admission is recognized by DBS:

"As distinct from the patient admitted by commitment or warrant, the voluntary patient is at liberty to leave the institution at any time, whether or not his departure has medical approval. Thus one might expect that the rising voluntary percentage would be accompanied by a rising proportion of discharges against medical advice. One might further guess that the absence of the latter rise resulted from a concomitant increase in satisfaction, on the part of the voluntary patients, with the care they were receiving. The facts are that over the four years (1953-1956) for which comparable data are available, no rise has occurred in ill-advised departures".<sup>26</sup>

An appropriate measure of the frequency of discharges against advice among discharges who were admitted on a voluntary basis would be the ratio of discharges against advice among discharges who were admitted on a voluntary basis.

Data have not been published on the number of discharges from public mental hospitals, who were admitted on a voluntary basis. In public mental hospitals during 1960 there were 4,741 voluntary admissions,<sup>27</sup> and 738 discharges against advice out of 17,021 discharges. This would indicate that the frequency of discharge against medical advice among patients admitted on a voluntary basis to public mental hospitals would be higher than 4 per cent.

## Utilization of Hospital Care by Discharges, and Deaths

During the five-year period, 1956-1960, a total of 150,070 discharges, with an aggregate stay of 85,740 years, were reported from Canadian psychiatric institutions. Nearly one-half of these discharges (N=71,527) were from public mental hospitals, and they had accumulated a total of 69,421 years of hospital care, 81 per cent of the hospital stay of all discharges. Another 1 per cent of discharges (N=1,689) were from public hospitals for mentally retarded, and they had spent 6,488 years in hospital, 8 per cent of the total. On the other hand, 21 per cent (N=31,218) of the discharges were from public psychiatric units, and they had utilized less than 3 per cent of the hospital time spent by all discharges.

There were 19,625 patients who died during 1956-1960, having spent some 147,000 years under hospital care during their last hospitalization. Between 1956 and 1960 the number of deaths and aggregate stay increased, but the mean stay remained at about seven and a half years. The mean stay of deaths was higher in hospitals for mentally retarded than in mental hospitals.

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<sup>25</sup>*Ibid.*, 1960, p. 118.

<sup>26</sup>*Ibid.*, 1956, p. 116.

<sup>27</sup>*Ibid.*, 1960, pp. 58, 88 and 118.



Because of the long mean stay of patients who died in hospital, the total period of continuous hospital care prior to death is large.<sup>28</sup> The 19,625 patients who died in psychiatric facilities during 1956-1960 had 147,000 years of hospital care during their last hospitalization. This amount of hospital care was 70 per cent *greater* than the 86,000 years of hospital care utilized by the 150,070 discharges during the same period.

TABLE 7-6

DISCHARGES BY TYPE OF INSTITUTION, NUMBER OF DISCHARGES, AGGREGATE STAY (IN THOUSANDS OF DAYS) AND MEAN STAY (IN DAYS), CANADA, 1956-1960

	1956	1957	1958	1959	1960
<i>All institutions</i>					
Number of discharges .....	24,955	26,707	30,241	33,186	34,981
Aggregate stay (thousands) ..	5,397	5,187	7,651	6,358	6,702
Mean stay .....	216	194	253	192	192
<i>Mental hospitals, public</i>					
Number of discharges .....	11,658	12,713	14,844	15,291	17,021
Aggregate stay (thousands) ..	4,502	4,309	6,249	4,791	5,488
Mean stay .....	386	339	421	313	322
<i>Hospitals for mentally retarded, public</i>					
Number of discharges .....	264	253	374	322	476
Aggregate stay (thousands) ..	316	339	665	462	586
Mean stay .....	1,198	1,340	1,779	1,436	1,232
<i>Psychiatric hospitals, public</i>					
Number of discharges .....	5,123	5,521	5,510	5,443	5,381
Aggregate stay (thousands) ..	196	197	204	215	229
Mean stay .....	38	36	37	40	43
<i>Psychiatric units, public</i>					
Number of discharges .....	4,713	5,036	5,856	7,907	7,706
Aggregate stay (thousands) ..	114	123	135	192	164
Mean stay .....	24	24	23	24	21

Source: Dominion Bureau of Statistics, *Mental Health Statistics, 1956, op. cit.*, p. 135;

*ibid.*, 1957, p. 125;

*ibid.*, 1958, p. 115;

*ibid.*, 1959, p. 121;

*ibid.*, 1960, pp. 105, 115.

<sup>28</sup> Dominion Bureau of Statistics, *Mental Health Statistics, 1956, p. 141.*

**TABLE 7-7**  
**DEATHS BY TYPE OF INSTITUTION, NUMBER**  
**OF DEATHS, AGGREGATE STAY (IN THOUSANDS OF DAYS), AND**  
**MEAN STAY (IN DAYS), CANADA, 1956-1960**

	1956	1957	1958	1959	1960
<i>All institutions</i>					
Deaths.....	3,423	3,989	3,775	4,153	4,285
Aggregate stay (thousands) ..	9,208	10,827	10,423	11,217	11,899
Mean stay .....	2,690	2,714	2,761	2,701	2,777
<i>Mental hospitals, public</i>					
Deaths.....	2,820	3,248	3,065	3,461	3,623
Aggregate stay (thousands)..	7,923	9,040	8,797	9,537	10,270
Mean stay .....	2,809.8	2,783	2,870	2,755.7	2,834.8
<i>Hospitals for mentally retarded, public</i>					
Deaths.....	154	233	165	185	189
Aggregate stay (thousands) ..	504	751	622	631	653
Mean stay .....	3,272	3,222	3,770	3,413	3,455.3
<i>Psychiatric hospitals, public</i>					
Deaths.....	45	49	45	38	16
Aggregate stay (thousands) ..	11	1	11	1	—
Mean stay .....	250.6 <sup>1</sup>	29	255	18.2	21.3
<i>Psychiatric units, public</i>					
Deaths.....	20	30	32	39	30
Aggregate stay (thousands) ..	—	—	—	1	1
Mean stay .....	19.4	16	12	21.3	27.4

<sup>1</sup> Skewed because of 3 patients in Manitoba with total of 8,674 days.

Source: Dominion Bureau of Statistics, *Mental Health Statistics 1956*, op. cit., p. 155;

*ibid.*, 1957, p. 145;

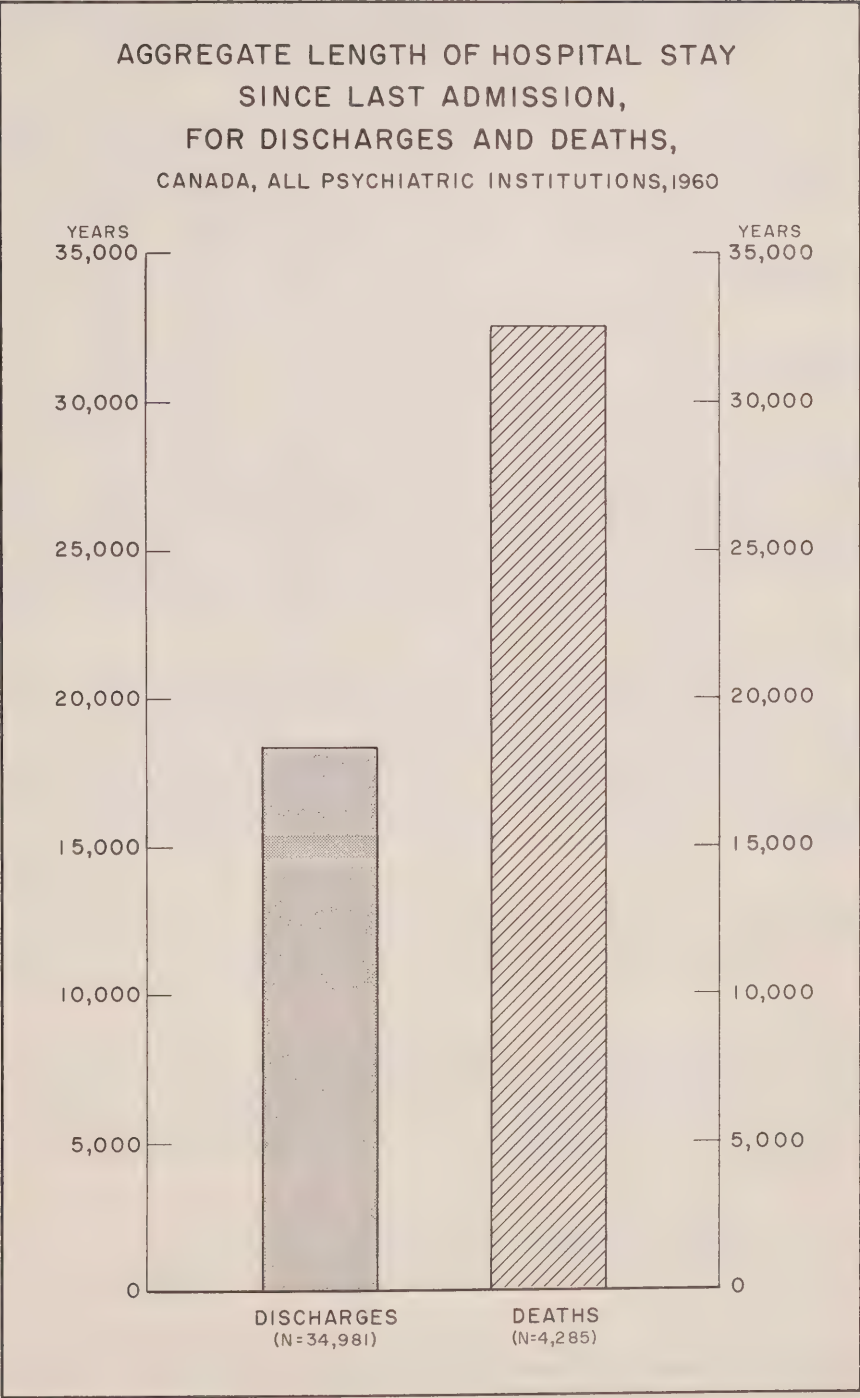
*ibid.*, 1958, p. 138;

*ibid.*, 1959, p. 131;

*ibid.*, 1960, p. 125.

Nearly one-half of the deaths between 1956-1960 were diagnosed as psychoses of the senium. These cases had a mean stay of about 2.3 years, and a total stay of 22,000 years. One-sixth of the cases were diagnosed as schizophrenic and paranoid psychoses, with a mean stay of 21 years and a total stay of 64,000 years. Patients diagnosed as mental retardation made up approximately one-tenth of the deaths with a mean stay of 13 years, and a total stay of 25,000 years.

FIGURE 7-1



**TABLE 7-8**  
**DEATHS BY DIAGNOSTIC GROUP;**  
**NUMBER OF DEATHS, AGGREGATE STAY (IN MONTHS),**  
**AND MEAN STAY (IN MONTHS),**  
**CANADA, 1956-1960**

		1956	1957	1958	1959	1960
ALL DEATHS	Number .....	3,423	3,989	3,775	4,153	4,285
	Aggregate stay ...	302,730	355,963	342,667	668,786	391,221
	Mean stay .....	88.4	89.2	90.7	88.8	91.3
ALL PSYCHOSES	Number .....	2,892	3,358	3,212	3,367	3,503
	Aggregate stay ...	240,083	282,061	277,729	288,552	308,965
	Mean stay .....	83.0	84.0	86.5	85.7	88.2
Psychoses of senium	Number .....	1,694	2,000	1,925	1,936	2,020
	Aggregate stay ...	45,556	60,229	51,263	52,078	52,924
	Mean stay .....	26.9	30.1	26.6	26.9	26.2
Schizophrenic reactions	Number .....	486	519	526	570	607
	Aggregate stay ...	120,912	135,791	140,299	144,951	164,558
	Mean stay .....	248.8	261.6	266.7	254.3	271.1
Paranoid reactions	Number .....	65	79	77	56	70
	Aggregate stay ...	11,165	12,058	14,657	9,884	13,664
	Mean stay .....	171.7	152.6	190.4	176.5	195.2
Manic-depressive reactions	Number .....	140	157	174	192	208
	Aggregate stay ...	18,047	19,339	21,950	23,347	25,605
	Mean stay .....	128.9	123.2	126.1	121.6	123.1
Involutional melancholia	Number .....	52	57	53	72	78
	Aggregate stay ...	2,746	3,687	2,316	5,299	5,093
	Mean stay .....	52.8	64.7	43.7	73.6	65.3
MENTAL RETARDATION	Number .....	355	402	333	414	405
	Aggregate stay ...	53,840	60,506	55,517	61,562	66,137
	Mean stay .....	151.7	150.5	166.7	148.7	163.3

Source: Dominion Bureau of Statistics, *Mental Health Statistics, 1956, 1957, 1958, 1959 and 1960*, op. cit.

## Conclusions

(i) The marked increase in the number of discharges between 1932 and 1960 was made up largely of patients staying under four months.

(ii) During 1956-1960 nearly one-half of all separations with more than one year of hospital care were deaths.

(iii) The 19,625 patients who died during 1956-1960 had spent 70 per cent more time in hospital than had 150,070 discharges.

(iv) Better methods of describing condition on discharge should be developed.

(v) The Dominion Bureau of Statistics continues to employ unsatisfactory indices of duration of stay. Actuarial rates of discharge and death, described for 1956-58 but not continued, should be resumed.



## PATIENTS IN PSYCHIATRIC INSTITUTIONS

### Introduction

#### *Definition of Residents, and Patients on the Books*

A resident is a patient in hospital while patients on books are those for whose care the psychiatric institution is responsible. Most of the patients on books are residents. In addition to residents, patients on books include patients who are in boarding homes under the supervision of a psychiatric institution; on probation;<sup>1</sup> or otherwise absent on trial-week-ends, holiday visits, etc., but for whom return is usually intended.

The proportion of the patients on books who were on probation or in supervised boarding homes has increased from 5.6 per cent in 1932 to 13.2 per cent in 1960. Factors other than the degree of recovery are associated with a committed patient being placed on probation upon leaving the hospital, and on the duration of probation itself. The sex ratio of patients on probation differs from the sex ratio of discharges. At the end of 1960, there were nearly 50 per cent more females (N=3,862) than males (N=2,681) on probation from public mental hospitals.<sup>2</sup>

The proportion of residents among patients on books of public mental hospitals at the end of 1960 was 86 per cent nationally, and ranged from 64 per cent in Prince Edward Island to 100 per cent in Newfoundland.

The date for which national statistics on residents and patients on the books are compiled is December 31st. This date is particularly prone to seasonal variation. Although Canadian public mental hospitals had an average of 52,194 patients hospitalized through 1960, at December 31st there were 50,742 residents.<sup>3</sup>

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<sup>1</sup>Patients on probation are legally committed patients considered well enough to leave hospital, but who are not discharged in full and may be returned for further hospital care without additional legal formalities.

<sup>2</sup>Dominion Bureau of Statistics, *Mental Health Statistics, Supplement: Patients in Institutions, 1960*, op. cit.

<sup>3</sup>Dominion Bureau of Statistics, *Mental Health Statistics, 1960*, op. cit., pp. 36-37. Difference between this figure and total shown in Table 8-1 is due to reclassification of one institution.

### *Significance of Ratios of Patients in Residence, and on Books*

Ratios of patients in residence are affected by rates of admission and separation and are, therefore, affected by a large number of factors which include the number of beds available, characteristics of the patients admitted, the severity of their illness, the demographic characteristics of the communities from which these patients are drawn and to which they return, the presence or absence of other facilities for the care and treatment of the mentally ill, the official and unofficial policies of the hospital which affect the admission or release of patients, the staffing patterns and treatment programs, the philosophy of the hospital with respect to the degree of improvement expected of the patients prior to return to the community, and the attitudes of the patient's family and the community toward the mentally ill and the mental hospital.<sup>4</sup>

TABLE 8-1

PERCENTAGE OF PATIENTS ON BOOKS IN RESIDENCE DECEMBER 31,  
SCHEDULE-REPORTING PUBLIC MENTAL HOSPITALS, CANADA, 1960

	Patients on books		Patients in residence	
	No. — 100.0%		No.	%
CANADA.....	58,757		50,249	86
Newfoundland.....	928		928	100
Prince Edward Island.....	473		303	64
Nova Scotia.....	2,425		2,242	92
New Brunswick.....	2,231		1,839	82
Quebec.....	19,790		17,719	90
Ontario.....	19,507		15,507	80
Manitoba.....	3,047		2,765	91
Saskatchewan.....	3,552		3,221	91
Alberta.....	3,147		2,689	85
British Columbia.....	3,687		3,036	82

Source: Dominion Bureau of Statistics, *Mental Health Statistics, 1960 Supplement; Patients in Institutions*, op. cit., pp. 15-18.

The number of patients on books is affected by provincial and institutional differences in discharge policies and procedures. It is paradoxical that patients attending day- or night-hospitals of psychiatric units in general hospitals are not considered as patients on books, while patients who have left mental hospital on probation, and who may not be regularly seeing a physician, are included as patients on books. The index of patients on books is becoming less useful as the proportion of residents decreases.

### **Trends in Resident Patients, 1932-1960**

#### *Number and Ratio of Patients*

While the number of patients on books of psychiatric institutions more than doubled from 35,279 in 1932 to 76,542 in 1960,<sup>5</sup> the number of residents increased

<sup>4</sup>American Public Health Association, *Mental Disorders, A Guide to Control Methods*, op. cit., p. 105.

<sup>5</sup>Over five-sixths of the residents in psychiatric institutions at June 1, 1931 were first admissions. It is not known what proportion of current residents are first admissions.

less, from 33,290 to 66,339. The national ratio of residents to population increased from 317 per 100,000 in 1932 to 372 in 1960. A similar degree of change did not occur in all provinces. Between 1932 and 1960, the proportion of the population in psychiatric institutions decreased in British Columbia, remained constant in Prince Edward Island, increased markedly in Saskatchewan and increased to lesser extents in the remaining provinces. Between 1955 and 1960 the ratio of residents (at Dec. 31) to population declined from 406 per 100,000 to 372 per 100,000 while the average number of in-patients decreased from 418 per 100,000 in 1955 to 385 in 1960.<sup>6</sup>

**TABLE 8-2**  
PATIENTS IN PSYCHIATRIC INSTITUTIONS AT DECEMBER 31,  
RATIO PER 100,000 POPULATION,  
CANADA AND PROVINCES, 1932, 1941, 1951, 1956 AND 1960

	1932	1941	1951	1956	1960 <sup>1</sup>
CANADA .....	317	392	395	405	372
Newfoundland .....	—	—	193	229	202
Prince Edward Island.....	294	291	297	484 <sup>2</sup>	294
Nova Scotia .....	294	382	377	418	334
New Brunswick .....	213	265	301	330	312
Quebec .....	323	399	392	403	387
Ontario .....	335	385	399	392	363
Manitoba.....	330	399	424	433	439
Saskatchewan .....	277	436	552	520	486
Alberta .....	253	356	368	398	367
British Columbia.....	395	477	416	457	369

<sup>1</sup> Quebec data for 1960 incomplete.

<sup>2</sup> Included patients in provincial infirmary.

Source: Dominion Bureau of Statistics, *Mental Health Statistics, 1960*, Ottawa Queen's Printer, 1962, p. 41.

### *Type of Institution*

Between 1932 and 1960 the number of institutions increased and specialized facilities were expanded and developed for the mentally retarded, aged and senile, and epileptic. Increased provision was made for intensive treatment in psychiatric hospitals and psychiatric units of general hospitals.<sup>7</sup> The proportion of residents hospitalized in public mental hospitals decreased from 91 per cent in 1941 to 76 per cent in 1960.

Nationally, the number of residents in public mental hospitals decreased between the end of 1958 and 1960, and the number in 1960 was 239 less than at the end of 1955. However, this reduction in large degree reflects policy changes

<sup>6</sup>Dominion Bureau of Statistics, *Mental Health Statistics, 1960*, *op. cit.*, p. 30.

<sup>7</sup>National data are not available on the development of admission or intensive treatment units within public mental hospitals.

regarding holiday visits, since the average daily population increased from 49,537 in 1955 to 52,194 in 1960. Annual decreases have occurred consistently between 1955 and 1960 for public mental hospitals in Saskatchewan, and British Columbia.

**TABLE 8-3**  
PATIENTS IN PSYCHIATRIC INSTITUTIONS, AT DECEMBER 31,  
BY TYPE OF INSTITUTION, CANADA, 1941, 1951, 1956 AND 1960

	1941	1951	1956	1960
ALL INSTITUTIONS .....	45,135	55,395	65,107	66,339
Mental hospitals, <sup>1</sup> public. ....	40,980	48,493	51,337	50,742
Hospitals for mentally retarded, public	2,845	4,903	8,716	10,844
Psychiatric hospitals, public. ....	97	313	523	443
Federal institutions. ....	744	1,367	1,455	1,299
Private institutions. ....	469	319	386	379
Psychiatric units, public. ....	—	—	676	680
Aged and senile homes, public. ....	—	—	1,758	1,742
Epilepsy hospital, public. ....	—	—	256	210

<sup>1</sup> Includes county and municipal hospitals.

Source: Dominion Bureau of Statistics, *Mental Institutions, 1951, op. cit.*, p. 13.

**TABLE 8-4**  
PATIENTS IN PUBLIC MENTAL HOSPITALS AT DECEMBER 31,  
CANADA AND PROVINCES, 1955-1960

	1955	1956	1957	1958	1959	1960
CANADA .....	50,981	51,337	51,734	51,747	50,990	50,742
Newfoundland .....	920	952	963	862	895	928
Prince Edward Island .....	309	301	295	303	283	303
Nova Scotia <sup>1</sup> .....	2,786	2,727	2,756	2,612	2,365	2,242
New Brunswick .....	1,835	1,816	1,823	1,847	1,807	1,839
Quebec <sup>2</sup> .....	15,760	16,247	16,501	16,871	17,613	17,719
Ontario. ....	15,839	16,065	16,246	16,122	16,253	16,000
Manitoba .....	2,820	2,795	2,831	2,877	2,846	2,765
Saskatchewan .....	3,651	3,429	3,339	3,317	3,208	3,221
Alberta. ....	3,293	3,262	3,295	3,378	2,586	2,689
British Columbia .....	3,768	3,743	3,685	3,558	3,134	3,036

<sup>1</sup> Includes county and municipal hospitals.

<sup>2</sup> Data incomplete for 1959-1960.

Source: Dominion Bureau of Statistics, *Mental Health Statistics, 1955*, p. 162; *1956*, p. 170; *1957*, p. 160; *1958*, pp. 12-13; *1959*, pp. 42-43; *1960*, pp. 36-37.

In contrast to the decreased number of residents in mental hospitals, the number in hospitals for mentally retarded increased consistently between 1955 and 1960, a five-year increase of 2,870 or 36 per cent.



TABLE 8-5

PATIENTS IN PUBLIC HOSPITALS FOR MENTALLY RETARDED, DECEMBER 31,  
CANADA AND PROVINCES, 1955-1960

	1955	1956	1957	1958	1959	1960
CANADA .....	7,944	8,716	9,032	9,456	10,266	10,844
Nova Scotia .....	147	157	160	159	161	161
Québec <sup>1</sup> .....	726	1,026	1,039	1,054	1,117	1,168
Ontario .....	3,453	3,751	3,924	4,074	4,346	4,585
Manitoba .....	765	776	818	908	935	1,009
Saskatchewan .....	939	1,097	1,116	1,122	1,115	1,127
Alberta .....	695	671	698	755	1,222	1,432
British Columbia .....	1,219	1,238	1,277	1,384	1,370	1,362

<sup>1</sup> Data incomplete for 1959-1960.

Note: There were no public hospitals for mentally retarded in Newfoundland, Prince Edward Island or New Brunswick.

Source: Same as Table 8-4.

### Personal Characteristics

Relatively little national data are available on the personal characteristics of residents, beyond tabulations on sex and age from the decennial census. The proportion of the population resident in psychiatric institutions was higher for males than for females in 1931, 1951 and 1960.

TABLE 8-6

RESIDENTS IN PSYCHIATRIC INSTITUTIONS, RATE PER 100,000 POPULATION,  
BY SEX, CANADA, 1931, 1951 AND 1960

SEX	1931	1951	1960
Male .....	317	422	402
Female .....	283	366	341

Source: Dominion Bureau of Statistics, *Census of Canada, 1931*, Vol IX, *op. cit.*  
Dominion Bureau of Statistics, *Census of Mental Institutions, June 1, 1951*;  
Reference paper No. 36, Ottawa: Queen's Printer 1952;  
Dominion Bureau of Statistics, *Mental Health Statistics, Supplement:*  
*Patients in Institutions 1960, op. cit., p. 15.*

The ratio of residents also varied with age. For patients resident in institutions the peak ratio was reached for the age group 55-64 in 1931, and in 1951 for those aged over 75.<sup>8,9</sup> This change between 1931 and 1951 represents decreased mortality among older residents of mental institutions, and increased admission rates for the older age groups in the population.

In-patient rates for married persons (224 per 100,000) were less than half those for single persons (530 per 100,000) in 1951.<sup>10</sup> Comparable data were not available for other years.

<sup>8</sup>Dominion Bureau of Statistics, *Census of Mental Institutions, June 1, 1951, op. cit., p. 8.*

<sup>9</sup>Data on the age distribution for residents at the end of 1960 were not available.

<sup>10</sup>*Ibid.*

TABLE 8-7

RESIDENTS IN PSYCHIATRIC INSTITUTIONS, BY AGE GROUP AND DIAGNOSIS,  
NUMBER AND RATIO PER 100,000 POPULATION, CANADA, 1931

		ALL AGES	Under 10	10-19	20-29	30-39	40-49	50-59	60-69	70+
ALL DIAGNOSES	No.	31,172	419	2,255	3,765	5,972	7,008	5,815	3,569	2,207
	Ratio	301	19	107	222	428	570	680	680	640
Schizophrenia and paranoid psychoses.....	No.	14,269	1	108	1,409	3,325	4,139	3,112	1,534	581
	Ratio	138	—	5	83	238	336	364	292	169
Affective psychoses .....	No.	3,273	1	39	187	418	779	929	638	263
	Ratio	32	—	2	11	30	63	109	122	76
Psychoses of senium .....	No.	1,753	—	2	3	8	36	170	541	984
	Ratio	17	—	—	—	1	3	20	103	286
Without psychosis <sup>1</sup> .....	No.	7,484	409	1,917	1,544	1,267	953	765	393	191
	Ratio	72	19	91	91	91	78	90	75	55

<sup>1</sup> 6,917 patients of the 7,484 patients without psychosis were diagnosed as mentally retarded.

Source: Dominion Bureau of Statistics, *Seventh Census of Canada, 1931*, Vol. IX, *op. cit.*, p. 210.

### Patients with Mental Retardation, 1932-1960

The number of patients on books diagnosed as mental retardation doubled between 1932 and 1951 (6,536 to 14,063). Between 1951 and 1960, the number with mental retardation increased by one-half, while patients diagnosed as psychotic increased less than 10 per cent.

TABLE 8-8

PATIENTS ON BOOKS,<sup>1</sup> BY DIAGNOSTIC GROUP, CANADA, SELECTED YEARS,  
1932 — 1960

	1932	1941	1951	1956	1960
ALL DIAGNOSES .....	35,279	49,245	60,263	69,066	75,443
Mental retardation (without psychosis) .....	6,536	10,249	14,063	17,958	21,046
All psychoses <sup>2</sup> .....	28,292	38,088	42,874	45,847	46,934

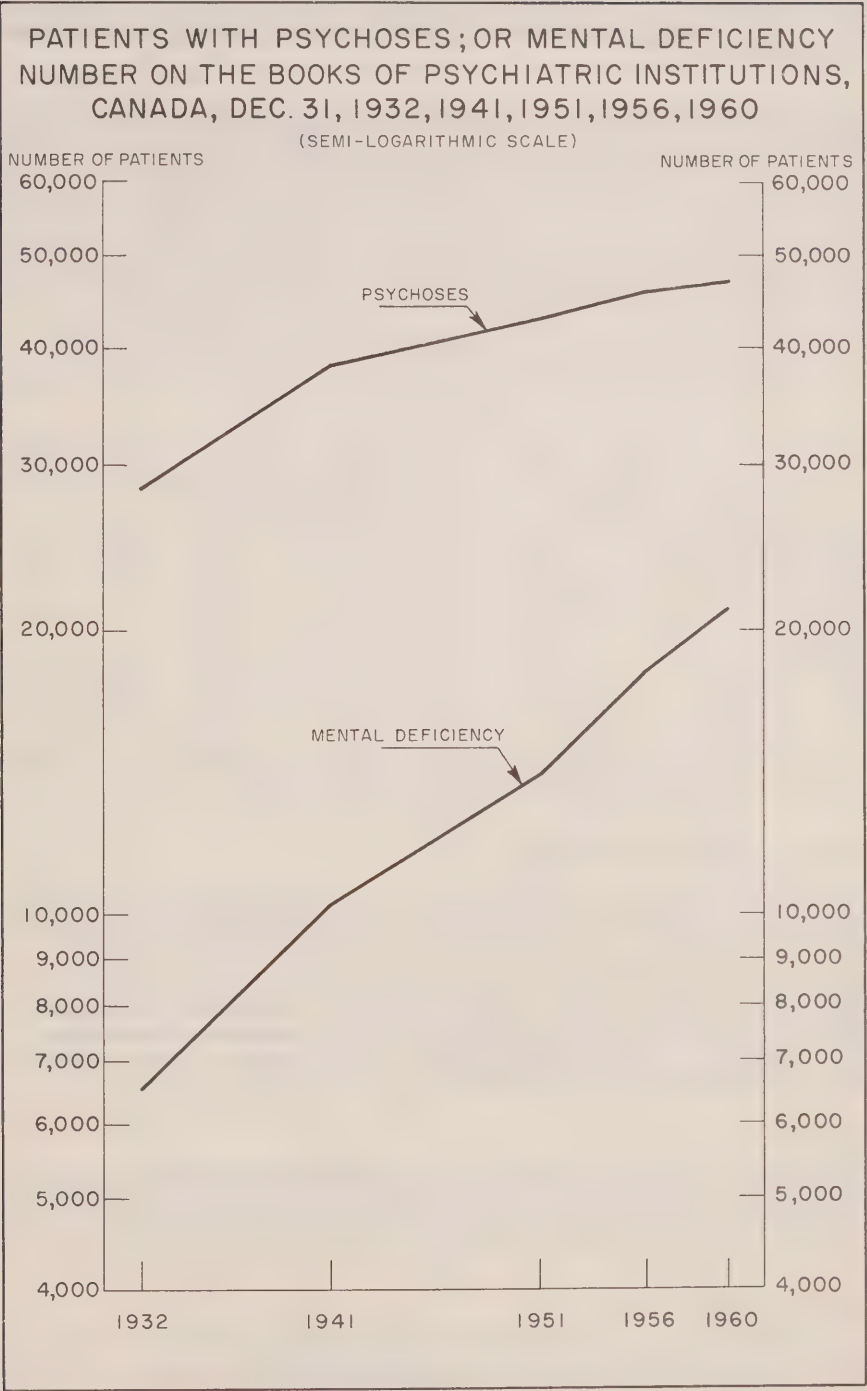
<sup>1</sup> Schedule-reported, 1932, 1941, 1951.

Card-reported, 1956, 1960.

<sup>2</sup> Included psychoneuroses and behaviour disorders in 1932 and 1941.

Source: Dominion Bureau of Statistics, *Mental Health Statistics, Supplement: Patients in Institutions 1955-57*, Ottawa: Queen's Printer, 1960, pp. 36-37; *Ibid.*, 1960, Ottawa: Queen's Printer, 1962, pp. 21-22; *Annual Report Mental Institutions 1932*, *op. cit.*, pp. 13-14; *Tenth Annual Report of Mental Institutions, 1941*, *op. cit.*, p. 11; *Mental Institutions 1951*, *op. cit.*, pp. 13-14.

FIGURE 8-1



The ratio of mentally retarded patients on the books to population, increased from 62 per 100,000 population in 1932 to 117 per 100,000 in 1960, while that for patients with all types of psychoses increased from 229 per 100,000 in 1931 to 260 per 100,000 in 1960.

Increased accommodation in separate institutions for mentally retarded has resulted in the transfer of some retarded patients formerly in mental hospitals, as well as for the admission of additional patients from the community. In 1955, 49 per cent of patients with mental retardation were in hospitals for mentally retarded in contrast to 61 per cent in 1960. The number of patients with mental retardation increased 21 per cent from 17,378 in 1955 to 21,046 in 1960. More marked increases occurred in the number with mongolism (65 per cent) and those with borderline intelligence (67 per cent).

**TABLE 8-9**  
**PATIENTS ON BOOKS WITH MENTAL RETARDATION, BY TYPE,**  
**CANADA, 1955 - 1960**

	1955	1956	1957	1958	1959	1960
<b>MENTAL RETARDATION</b>	17,378	17,958	18,503	19,193	20,071	21,046
Idiocy .....	3,580	3,734	3,810	3,941	4,168	4,415
Imbecility .....	6,606	6,770	6,945	7,223	7,485	7,771
Moron .....	4,299	4,426	4,596	4,788	4,959	5,189
Borderline .....	345	393	466	491	542	576
Mongolism .....	775	854	915	1,002	1,144	1,282
Other .....	1,773	1,781	1,771	1,748	1,773	1,813

Source: Dominion Bureau of Statistics, *Mental Health Statistics, Supplement: Patients in Institutions*, op. cit., 1955-1957, p. 37; 1958, p. 21; 1959, p. 24; 1960, p. 22.

### Patients on Books, 1955-1960

A census of patients on books at the end of the year has been compiled annually since 1955 (see Appendix 8-1). Dominion Bureau of Statistics has published tabulations based on the content of the census, namely age, sex, diagnosis, year of admission, type of institution, and province. The tabulations are restricted in scope, both by the limited data available on the census card, and by the methods of analysis employed. Additional data should be added from those available on the admission cards, and longitudinal analyses should be employed, as described in Chapter 10.

#### Personal Characteristics

Sex-specific ratios were higher for males than females at each age-group up to the age of 69, then became higher for females for older age groups. The ratios increased progressively with age. Between 1955 and 1960 decreased ratios occurred for males aged 40-59 and females aged 30-59 (see Appendix 8-2).

#### Diagnostic Characteristics

Decreases in the rate per 100,000 for psychoses have occurred for both males and females for each decennial group between ages 20 and 69. The ratios for mental retardation have increased in each age group.



Among functional psychoses the peak rate occurred for the groups aged 60-69, while for mental retardation the highest ratios were in those aged 10-19 (see Appendices 8-3,-4).

#### *Time since Admission*

At the end of 1955, 58.6 per cent (N=39,548) of patients on the books had been admitted more than five years previously. By the end of 1960, 56.6 per cent of the patients had been on the books continuously for more than five years, but the absolute number had increased to 42,660.<sup>11</sup>

Between 1955 and 1960, the number of patients with two to five years continuous care decreased from 10,941 to 9,871, while patients admitted more than five years previously increased from 39,548 to 42,660. There was a higher proportion of recent admissions among the patients on books at the end of 1960 than in 1955, and so the median length of stay was reduced from 91 months to 84 months.

TABLE 8-10

DISTRIBUTION OF LENGTH OF STAY OF PATIENTS ON BOOKS, ALL PSYCHIATRIC INSTITUTIONS, CANADA, 1955 AND 1960

	1955		1960	
	No.	Per cent	No.	Per cent
ALL .....	67,525	100.0	75,443	100.0
Under 4 months .....	5,563	8.2	8,016	10.6
4 - 8 months .....	3,629	5.4	4,976	6.6
8 - 12 months .....	2,420	3.6	4,047	5.4
1 - 2 years.....	5,424	8.0	5,873	7.8
2 - 5 years.....	10,941	16.2	9,871	13.1
5 or more years .....	39,548	58.6	42,660	56.6
Median stay .....	91 months		84 months	

Source: Dominion Bureau of Statistics, *Mental Health Statistics Supplement: Patients in Institutions, 1955-57, op. cit., p. 53; 1960, p. 39.*

Although the number of admissions had increased steadily between 1951-1960, continuous retention of these patients decreased. At the end of 1960, 9,871 individual patients remained of those admitted during 1956 to 1958, while, at the end of 1955, 10,941 patients had been retained from the smaller number of patients admitted during 1951 to 1953.

Males in psychiatric institutions have been under hospital care longer than females. The age group 60-69 had the longest median stay for both males and females.<sup>12</sup> The median time since admission increased progressively for the various age groups up to the 60-69 age group, and then decreased.

<sup>11</sup> In 1931, 51.5 per cent of residents in psychiatric institutions had been admitted more than five years previously (See Appendix 8-5).

<sup>12</sup> Note the previously mentioned peak population ratio of functional psychoses in this age group.

**TABLE 8-11**  
**MEDIAN TIME (IN MONTHS) SINCE ADMISSION,**  
**PATIENTS ON BOOKS AT DECEMBER 31, CANADA, 1955-1960**

	Male						Female					
	1955	1956	1957	1958	1959	1960	1955	1956	1957	1958	1959	1960
Total	87	93	96	95	96	89	87	86	88	88	88	78
0-9	20	23	28	26	120+	120+	22	24	26	25	120+	120+
10-19	46	46	52	54	120+	120+	46	49	50	50	120+	120+
20-29	50	51	58	59	60	55	50	52	57	56	59	50
30-39	80	80	81	81	84	74	62	60	67	64	60	52
40-49	120+	120+	120+	120+	137	123	111	107	111	109	110	99
50-59	120+	120+	120+	120+	178	170	120+	120+	120+	120+	158	142
60-69	120+	120+	120+	120+	200	182	120+	120+	120+	120+	179	166
70-79	110	109	116	120+	126	120	108	108	110	110	114	101
80-89	49	47	51	50	43	42	53	56	57	54	50	47
90+	55	55	63	49	44	54	41	44	48	53	54	57

Source: Dominion Bureau of Statistics, *Mental Health Statistics, Supplement: Patients in Institutions, op. cit.*,

1955-57, pp. 54-55;

1958, pp. 34-35;

1959, pp. 34-35;

1960, pp. 39-40.

Between 1955 and 1960 the total number of patients with psychoses on books of mental hospitals increased from 41,282 to 43,511.

Absolute decreases occurred for females aged 35-44, and patients hospitalized between two and five years. The rate per 100,000 population decreased overall from 260 per 100,000 in 1955 to 239 per 100,000 in 1960 for the age groups 35 years and over, and for patients with duration of stay over two years.

### Patients on Books, December 31, 1960

More detailed cross-tabulations were provided by Dominion Bureau of Statistics for the census of patients on books at December 31, 1960.

#### *Sex, Age and Diagnostic Group*

Nationally the over-all ratio of patients on books of psychiatric institutions was higher for males (448 per 100,000) than females (399 per 100,000). Age-specific ratios were higher for males than females up to the age of 65; over the age of 65 the ratio for females (1,100 per 100,000) exceeded that for males (1,072 per 100,000).

Population ratios increased progressively with age from near 0.1 per cent for children to 1.1 per cent for those over the age of 65. Among the various diagnostic groups the age-specific frequencies varied; mental retardation reached a peak in those aged 15-34 and diminished subsequently, while schizophrenia and manic depressive psychoses were highest in those aged 45-64.

TABLE 8-12  
 PATIENTS WITH PSYCHOSES  
 ON BOOKS OF PUBLIC MENTAL HOSPITALS,  
 NUMBER AND RATE PER 100,000,<sup>1</sup> BY SEX AND AGE GROUP, AND TIME SINCE ADMISSION,  
 CANADA, 1955 AND 1960

	Time since Admission (Years)	All Ages	Age Group				Not Stated	
			0-14	15-34	35-44	45-64		65+
MALES	All	21,587	11	3,489	4,068	9,011	4,966	42
	Durations, 1955	265	-	148	377	632	798	
	Under 2	4,960	5	1,592	921	1,296	1,131	15
		61	-	- 67	85	91	182	
	2-5	3,124	-	879	627	895	715	8
		38	-	37	58	63	115	
	5-9	2,954	3	646	685	1,102	515	3
		36	-	27	64	77	83	
	10+	10,549	3	372	1,835	5,718	2,805	16
		129	-	16	170	401	419	
FEMALES	All	20,235	14	2,577	3,697	8,247	5,664	36
	Durations, 1955	255	1	110	348	615	912	
	Under 2,	5,332	3	1,322	1,065	1,524	1,415	3
		67	-	56	100	114	228	
	2-5	3,044	1	564	668	952	852	7
		38	-	24	63	71	137	
	5-9	2,718	4	423	680	1,062	546	3
		34	-	18	64	79	88	
	10+	9,141	6	268	1,284	4,709	2,851	23
		115	-	11	121	351	459	

TABLE 8-12 (Continued)  
 PATIENTS WITH PSYCHOSES  
 ON BOOKS OF PUBLIC MENTAL HOSPITALS,  
 NUMBER AND RATE PER 100,000, BY SEX AND AGE GROUP, AND TIME SINCE ADMISSION,  
 CANADA, 1955 AND 1960

	Time since Admission (Years)	All Ages	Age Group					Not Stated
			0-14	15-34	35-44	45-64	65+	
MALES AND FEMALES	All	41,822	25	6,066	7,765	17,258	10,630	78
	Durations, 1955	260	-	129	363	624	855	
	Under 2	10,292	8	2,914	1,986	2,820	2,546	18
		64	-	62	93	102	205	
	2-5	6,168	1	1,443	1,295	1,847	1,567	15
		38	-	31	61	67	126	
	5-9	5,672	7	1,069	1,365	2,164	1,061	6
		35	-	23	64	78	85	
	10+	19,690	9	640	3,119	10,427	5,456	39
		122	-	14	146	377	439	
MALES	All Durations, 1960	22,757	31	3,967	4,047	9,535	5,149	28
		247	1	154	340	591	764	
	Under 2.....	6,282	23	2,071	1,166	1,698	1,324	-
		68	1	80	98	105	196	
	2-5.....	2,759	3	735	513	828	676	4
		30	-	29	43	51	100	
	5-9.....	3,382	3	783	787	1,219	579	11
		37	-	30	66	76	86	
	10+.....	10,334	2	378	1,581	5,790	2,570	13
		112	-	15	133	359	381	



TABLE 8-12 (Concluded)

FEMALES	All Durations, 1960	Number	20,754	28	2,664	3,489	8,455	6,093	25
		Rate	230	1	106	291	544	850	
	Under 2.....	Number	6,948	19	1,636	1,435	2,186	1,672	—
		Rate	77	1	65	120	141	233	
	2 — 5.....	Number	2,604	4	444	431	806	915	4
		Rate	29	—	18	36	52	128	
	5 — 9.....	Number	2,672	1	380	560	1,014	714	3
		Rate	30	—	15	47	65	100	
	10 +.....	Number	8,530	4	204	1,063	4,449	2,792	18
		Rate	95	—	8	89	286	389	
MALES AND FEMALES	All Durations, 1960	Number	43,511	59	6,631	7,536	17,990	11,242	53
		Rate	239	1	130	315	568	808	
	Under 2.....	Number	13,230	42	3,707	2,601	3,884	2,996	—
		Rate	73	1	73	109	123	215	
	2 — 5.....	Number	5,363	7	1,179	944	1,634	1,591	8
		Rate	29	—	23	39	52	114	
	5 — 9.....	Number	6,054	4	1,163	1,347	2,233	1,293	14
		Rate	33	—	23	56	70	93	
	10 +.....	Number	18,864	6	582	2,644	10,239	5,362	31
		Rate	103	—	11	111	323	385	

<sup>1</sup> Rates based on denominators from the 1956 and 1961 Census.

Source: Data derived from special tabulations of Dominion Bureau of Statistics, 1962, and Richman, A., *Patients in Canadian Mental Hospitals*, unpublished data.

TABLE 8-13  
PATIENTS ON BOOKS, BY TYPE OF INSTITUTION, DIAGNOSTIC GROUP, SEX AND AGE GROUP, NUMBER  
AND RATIO PER 100,000 POPULATION, CANADA, DECEMBER 31, 1960

	Male					Female						
	Total	0-14	15-34	35-44	45-64	65+	Total	0-14	15-34	35-44	45-64	65+
ALL INSTITUTIONS												
All Diagnoses.. No.	40,423	3,434	10,434	6,619	12,919	6,969	35,020	2,481	7,915	5,640	11,401	7,548
Ratio	448	113	404	568	819	1,072	399	85	317	483	753	1,100
Schizophrenia and manic depressive .. No.	16,868	54	3,591	3,662	6,923	2,618	14,477	34	2,428	3,072	6,119	2,804
psychoses ... Ratio	187	2	139	314	439	403	165	1	97	263	404	409
Psychoses of .. No.	2,193	-	1	5	167	2,017	2,665	-	2	5	122	2,535
the senium .. Ratio	24	-	...	...	11	310	30	-	...	...	8	370
Mental retardation .. No.	11,755	3,064	5,161	1,448	1,664	407	9,291	2,188	3,843	1,278	1,576	397
Ratio .....	130	100	200	124	106	63	106	75	154	109	104	58
PUBLIC MENTAL HOSPITALS												
All Diagnoses.. No.	31,233	680	7,368	5,596	11,727	5,824	27,420	534	5,203	4,749	10,174	6,733
Ratio	346	22	285	480	744	896	312	18	209	407	672	982
Schizophrenia and manic depressive... No.	15,570	22	3,424	3,340	6,559	2,209	13,765	19	2,263	2,942	5,884	2,637
psychoses ... Ratio	172	1	133	287	416	340	157	1	91	252	388	385
Psychoses of .. No.	1,856	-	-	5	147	1,701	2,351	-	2	5	119	2,224
the senium... Ratio	21	-	-	...	9	262	27	-	...	...	8	324
Mental Retardation .. No.	5,594	580	2,491	940	1,232	344	4,026	437	1,662	712	915	299
Ratio	62	19	96	81	78	53	46	15	67	61	60	44
HOSPITALS FOR MENTALLY RETARDED												
All Diagnoses.. No.	6,582	2,727	2,769	530	481	70	5,948	1,898	2,330	650	864	198
Ratio	73	89	107	46	30	11	68	65	93	56	57	29
Mental retardation .. No.	6,126	2,482	2,660	502	428	50	5,237	1,750	2,168	557	656	98
Ratio .....	68	81	103	43	27	8	60	60	87	48	43	14

Source: Data derived from special tabulations provided by Dominion Bureau of Statistics, 1962.

*Provincial Differences in Frequency*

There were wide provincial differences in the population ratio of patients on books. Major factors associated with this variation included the type of institution in each province, the diagnostic composition of patients on the books, the proportion of long-stay patients, as well as provincial differences in the extent of card-reporting, and policies regarding probation (see Appendix 8-6).

Highest over-all rates for males were found in Saskatchewan, and for females in Manitoba. Ontario had the highest rates for children, Quebec for the 15-34 year age-group, Prince Edward Island for those aged 35-44 years, and Saskatchewan for the group aged 65 and over. Ratios for those aged 45-64 years were highest for males in Prince Edward Island, and for females in Manitoba.

Patients with mental retardation had the highest over-all ratios in Saskatchewan. Ratios for children were highest in British Columbia, and ratios for those aged 65 and over were highest in Quebec.

Psychoses of senium were most frequent in Saskatchewan, followed by Ontario for males, and British Columbia for females. The considerable range in provincial ratios for psychoses of senium and mental retardation reflect variations in admission policies and differences in the availability of alternative forms of care for these diagnostic groups.

*Age and Sex Differences in Time since Admission*

At the end of 1960, the 75,443 patients reported on the books of psychiatric institutions included not only 17,039 patients who had been admitted during 1960, but some 58,404 patients who had been admitted during many previous years. These 58,404 patients represented a progressive accumulation from past years of admissions who had neither been discharged nor died.

One-fifth of the patients had been admitted<sup>13</sup> prior to 1941, another one-fifth between 1941 and 1950, and one-fifth had been admitted during 1960. One-half of all patients had been admitted prior to 1954.

These patients ranged in age from early childhood to over 90 years. Nearly 20,000 patients were over 60 years old and of these 36 per cent had been admitted more than 20 years earlier.<sup>14</sup> This elderly population included patients recently admitted with psychoses of aging, as well as patients who had grown old in hospital.

There were almost 6,000 children under the age of 15 in psychiatric institutions. Three-tenths of these children had been hospitalized for more than five years. Nine-tenths of children were diagnosed as mentally retarded.<sup>15</sup>

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<sup>13</sup>These admission dates refer to the date of admission for the current hospitalization, and not to the date for any earlier admissions.

<sup>14</sup>Dominion Bureau of Statistics, *Mental Health Statistics, Supplement: Patients in Institutions, 1960*, op. cit., p. 39.

<sup>15</sup>Over one thousand of the children diagnosed as mental retardation were being cared for in public mental hospitals. Appendix 8-7.

**TABLE 8-14**  
**PATIENTS ON BOOKS, ALL PSYCHIATRIC INSTITUTIONS, BY SEX AND AGE GROUP,**  
**RATIO PER 100,000 POPULATION, CANADA AND PROVINCES, DECEMBER 31, 1960**

	MALE					FEMALE						
	All	Under 15	15-34	35-44	45-64	65+	All	Under 15	15-34	35-44	45-64	65+
CANADA.....	448	112	404	568	819	1,072	398	85	317	483	753	1,101
Newfoundland.....	227	2	190	432	577	750	175	4	114	296	533	674
Prince Edward Island....	529	11	404	982	1,160	1,100	386	6	333	672	733	891
Nova Scotia .....	170	58	189	206	298	278	173	52	187	214	291	313
New Brunswick .....	390	23	352	653	887	892	354	21	274	555	750	1,089
Quebec .....	481	112	479	702	940	1,059	410	82	352	562	872	1,039
Ontario .....	459	147	404	512	785	1,117	433	109	342	458	736	1,186
Manitoba .....	474	87	420	671	836	1,002	469	61	317	638	919	1,198
Saskatchewan.....	588	99	413	698	1,054	1,715	465	74	311	591	898	1,449
Alberta .....	403	101	358	478	852	838	322	82	246	398	719	833
British Columbia .....	459	134	364	491	711	1,177	403	109	300	390	575	1,273

Source: Based on Appendix Table 8-6.



**TABLE 8-15**  
**PATIENTS ON BOOKS WITH MENTAL RETARDATION, BY SEX AND AGE GROUP,**  
**RATIO PER 100,000 POPULATION, ALL PSYCHIATRIC INSTITUTIONS, CANADA AND PROVINCES, DECEMBER 31, 1960**

	Male					Female						
	All	Under 15	15—34	35—44	45—64	65+	All	Under 15	15—34	35—44	45—64	65+
CANADA .....	130	100	200	124	106	63	106	75	154	109	104	58
Newfoundland.....	23	—	35	52	48	—	29	—	34	74	72	—
Prince Edward Island...	82	—	103	143	191	—	30	—	45	52	47	—
Nova Scotia.....	47	54	71	34	23	—	44	47	62	25	34	19
New Brunswick.....	76	17	119	115	111	67	55	16	66	113	82	55
Quebec.....	151	105	224	134	135	128	114	70	166	107	114	117
Ontario.....	138	122	213	122	95	61	112	93	165	105	97	50
Manitoba .....	126	80	203	161	112	34	116	58	164	139	155	56
Saskatchewan .....	160	100	239	207	186	65	151	66	200	247	202	68
Alberta.....	119	94	189	136	85	20	103	78	151	112	101	12
British Columbia.....	123	130	201	90	73	25	103	108	161	89	70	17

Source: Based on Appendix Table 8 - 6.

TABLE 8-16

PATIENTS ON BOOKS WITH PSYCHOSES OF SENIUM, RATIO PER 100,000 POPULATION  
AGED 65+ YEARS, ALL PSYCHIATRIC INSTITUTIONS,  
CANADA AND PROVINCES, DECEMBER 31, 1960

	Male	Female
CANADA.....	310	370
Newfoundland .....	297	318
Prince Edward Island.....	180	255
Nova Scotia .....	119	150
New Brunswick.....	390	349
Quebec.....	230	233
Ontario.....	348	427
Manitoba .....	188	282
Saskatchewan.....	678	627
Alberta.....	219	291
British Columbia .....	312	517

Source: Based on Appendix Table 8-6.

TABLE 8-17

PATIENTS ON BOOKS, BY YEAR OF ADMISSION,  
CANADA, DECEMBER 31, 1960

Admission Year for Current Hospitalization	Number
TOTAL .....	75,443
Before 1941 .....	15,689
1941-1945.....	6,265
1946-1950.....	8,352
1951-1955.....	12,354
1956-1957.....	5,908
1958.....	3,963
1959.....	5,873
1960.....	17,039

Source: Dominion Bureau of Statistics, *Mental Health Statistics, Supplement: Patients in Institutions*, 1960, *op. cit.*, p. 33.

The median time since admission increased with age up to the age of 65. Subsequently median stay decreased due to death of long-stay patients, and to recent admission of aged patients with psychoses of the senium.

Median stay was higher for males than females in mental hospitals, and higher for females than males in hospitals for mentally retarded.

TABLE 8-18  
PATIENTS ON BOOKS OF PSYCHIATRIC INSTITUTIONS,  
NUMBER OF PATIENTS AND MEDIAN STAY (IN MONTHS),  
BY TYPE OF INSTITUTION, AGE GROUP AND SEX,  
CANADA, DECEMBER 31, 1960

	All		0-14		15-34		35-44		45-64		65+	
	No.	Median Stay	No.	Median Stay	No.	Median Stay	No.	Median Stay	No.	Median Stay	No.	Median Stay
ALL INSTITUTIONS												
Male.....	40,423	89	3,434	34	10,434	59	6,619	95	12,919	120+	6,969	116+
Female .....	35,020	78	2,481	34	7,915	48	5,640	72	11,401	120+	7,548	96+
Public mental hospitals												
Male.....	31,233	97	680	27	7,368	48	5,596	91	11,727	120+	5,824	120+
Female .....	27,420	80	534	33	5,203	27	4,749	61	10,174	120+	6,733	102
Public hospitals for mentally retarded												
Male.....	6,582	79	2,727	35	2,767	107	530	120+	481	120+	70	120+
Female .....	5,948	94	1,898	35	2,330	102	650	120+	864	120+	198	120+

Source: Based on Appendix Tables 8-8, 8-9, 8-10.

TABLE 8-19  
DIAGNOSTIC COMPOSITION OF PATIENTS ON BOOKS FOR VARIOUS INTERVALS,  
CANADA, DECEMBER 31, 1960

	Length of Hospital Care (Years)									
	Under 1 year		1 - 5		5 - 10		10 - 20		20 +	
	No.	%	No.	%	No.	%	No.	%	No.	%
TOTAL .....	17,039	100	15,744	100	12,354	100	14,617	100	15,689	100
Schizophrenia and paranoid psychoses .....	6,035	35	4,566	29	3,833	31	6,000	41	8,256	53
Affective psychoses .....	2,113	12	1,146	7	734	6	973	7	918	6
Psychoses of senium .....	1,676	10	2,111	13	708	6	252	2	111	1
Other psychoses .....	1,327	8	1,365	9	1,197	10	1,975	14	1,638	10
Psychoneuroses .....	1,334	8	368	2	138	1	128	1	130	1
Mental retardation .....	2,255	13	4,222	27	4,699	38	4,395	30	4,019	26
Epilepsy .....	589	3	1,101	7	688	6	548	4	419	3
Remaining diagnoses .....	1,710	10	865	5	357	3	346	2	198	1

Source: Dominion Bureau of Statistics, *Mental Health Statistics, Supplement: Patients in Institutions, 1960*, op. cit., p. 43.



DIAGNOSTIC DISTRIBUTION OF FIRST ADMISSIONS;  
AND PATIENTS ON BOOKS FOR VARIOUS INTERVALS  
CANADA, PSYCHIATRIC INSTITUTIONS, DEC. 31, 1960

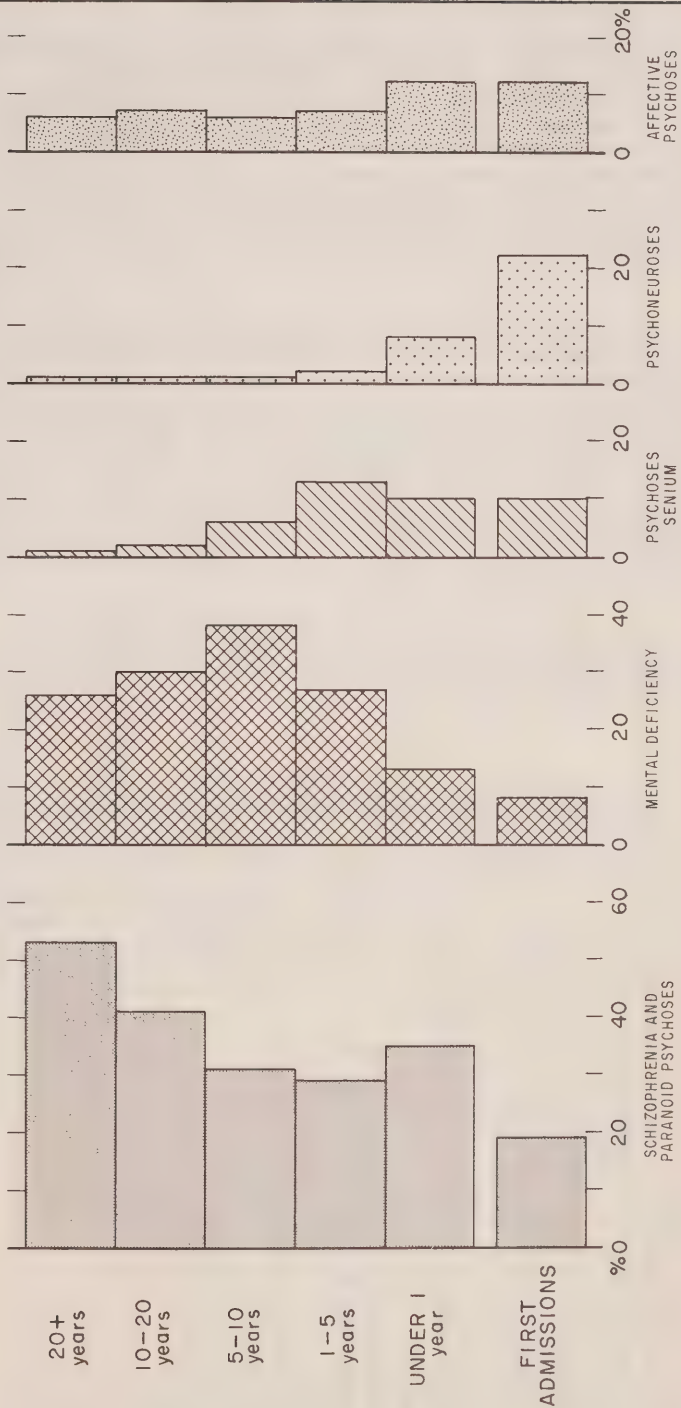


FIGURE 8-2

*Time since Admission by Diagnostic Group*

The diagnostic composition of patients of different lengths of stay varies considerably. The proportion of patients diagnosed as schizophrenia and paranoid psychoses was 35 per cent among those with less than one year's stay, and 53 per cent among those admitted 20 or more years previously. The proportion of patients diagnosed as mentally retarded increased from 13 per cent of those with less than one year's stay to 38 per cent of those hospitalized 5-10 years, and 26 per cent of patients admitted 20 or more years previously. Patients with senile psychoses decreased from 10 per cent of those with less than one year's stay, to 1 per cent of those with more than 20 years stay.

In addition to diagnostic variation among patients of different lengths of stay, the diagnostic composition of patients of *similar stay* varied interprovincially. For patients who had been on books between 4-12 months, there were wide provincial fluctuations in the diagnostic distribution of schizophrenia and paranoid psychoses, mental retardation, and psychoses of the senium. Schizophrenia and paranoid psychoses ranged from 19 to 57 per cent, mental retardation from 5 to 35 per cent and psychoses of the senium from 5 to 28 per cent of patients on the books between 4-12 months. These wide fluctuations indicate provincial differences in hospital accommodation, community care, admission policies, and diagnostic usage.

Over one-third (26,718) of all patients were diagnosed as schizophrenic psychoses. Fifty per cent (N= 13,252) of patients with schizophrenia had been hospitalized for more than ten years.

TABLE 8-20

DIAGNOSTIC COMPOSITION OF PATIENTS WITH HOSPITAL STAY OF 4-12 MONTHS, PATIENTS ON BOOKS, CANADA AND PROVINCES, DECEMBER 31, 1960

	TOTAL N= 100%	Schizophrenia and Paranoid Psychoses	Psychoses of Senium	Mental Retardation
		%	%	%
CANADA .....	9,021	38	11	17
Newfoundland .....	86	36	22	5
Prince Edward Island....	103	19	11	10
Nova Scotia.....	245	44	11	9
New Brunswick.....	283	33	19	10
Quebec.....	3,000	40	5	18
Ontario.....	3,112	35	14	16
Manitoba .....	358	57	9	10
Saskatchewan .....	364	37	28	14
Alberta.....	665	29	11	35
British Columbia .....	815	43	10	17

Source: Data derived from special tabulations provided by Dominion Bureau of Statistics, 1962.

TABLE 8-21  
NUMBER OF PATIENTS ON BOOKS, PERCENTAGE OVER TEN YEARS STAY AND MEDIAN STAY  
BY DIAGNOSTIC GROUP,  
ALL INSTITUTIONS AND PUBLIC MENTAL HOSPITALS, CANADA, DECEMBER 31, 1960

	All Institutions			Public Mental Hospital		
				Male		Female
	All	% over 10 yrs.	Median Stay (months)	No.	Median Stay (months)	No.  Median Stay (months)
TOTAL .....	75,443	40.2	84	31,233	97	27,420 80
Schizophrenia .....	26,718	49.6	118	13,745	126	11,295 109
Manic depressive reaction .....	4,627	35.3	52	1,825	70	2,470 53
Involuntal melancholia .....	1,257	20.5	21	347	36	812 21
Paranoia and paranoid state .....	1,972	51.0	123	898	106	1,000 139
Psychoses of senium .....	4,858	7.5	23	1,856	21	2,351 23
Other and unspecified psychoses .....	7,502	48.1	113	4,086	118	2,825 112
Psychoneuroses .....	2,098	12.3	6	500	14	1,007 10
Mental retardation <sup>1</sup> .....	19,590	42.9	102	5,295	120	3,798 128
Epilepsy .....	3,345	28.9	59	971	77	792 81
Other disorders of character, behaviour, intelligence and non-psychiatric condition	3,143	7.2	10	1,519	9	928 13
Not stated .....	333	94.9	180 +	191	180 +	142 180 +

<sup>1</sup> Excluding mental deficiency with epilepsy.  
Source: Dominion Bureau of Statistics, *Mental Health Statistics, Supplement: Patients in Institutions, 1960, op. cit.*, pp. 15; 43-46.

Another 19,590 patients were diagnosed as mental retardation and of these 8,414 (42.9 per cent) had been admitted more than ten years previously. A total of 9,093 patients with mental retardation were in public mental hospitals and over half of these patients had been admitted more than ten years previously (see Appendix 8-7). The other half were in special hospitals for mentally retarded, where one-third had been admitted more than ten years previously.

#### *Time since Admission by Type of Institution and Province*

Public mental hospitals contained 78 per cent of the patients, and half of these patients had been admitted more than 7.4 years previously. One-sixth (N=12,530) of the patients were in hospitals for mentally retarded, where the median stay was 7.1 years, slightly less than for public mental hospitals. The remaining 4,260 patients were in various other types of psychiatric institutions.

Overall, the median length of stay ranged from 22 months in Prince Edward Island to over ten years<sup>10</sup> in Saskatchewan, and for females ranged from 44 months in Prince Edward Island to over ten years in Saskatchewan.

For the age group 15-44 for both males and females, median stay was lowest in Prince Edward Island and highest in Saskatchewan. Among patients aged 45 to 64, most provinces had median stays of more than ten years.

These median stays were somewhat irregular, and one cannot differentiate whether a "high" median stay was due to an accumulation of long-stay patients or to various factors reducing the retention of recent admissions (see Appendix 8-8).

For patients in public mental hospitals the median stay for males ranged from 22 months in Prince Edward Island to over 10 years in Manitoba and Saskatchewan, and for females the extremes occurred in Prince Edward Island and Manitoba (see Appendix 8-9).

Separate institutions for mentally retarded were not available in all provinces. Saskatchewan had the highest median stay among the provinces with such facilities (see Appendix 8-10).

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<sup>10</sup> Median stays of over ten years were not further sub-categorized.



TABLE 8-22  
PATIENTS ON BOOKS, BY TYPE OF INSTITUTION AND SEX, NUMBER  
AND RATIO PER 100,000 POPULATION, AND MEDIAN STAY (IN  
MONTHS), CANADA AND PROVINCES, DECEMBER 31, 1960

	All Facilities						Public Mental Hospitals				Public Hospitals for Mentally Retarded			
	Male			Female			Male		Female		Male		Female	
	No.	Ratio	Median Stay	No.	Ratio	Median Stay	No.	Median Stay	No.	Median Stay	No.	Median Stay	No.	Median Stay
CANADA.....	40,423	448	89	35,020	399	78	31,233	97	27,420	80	6,582	79	5,948	94
Newfoundland.....	541	227	80	387	175	77	541	80	387	77	—	...	—	...
Prince Edward Island...	276	529	22	196	386	44	276	22	196	44	—	...	—	...
Nova Scotia .....	629	170	17	612	173	11	530	12	536	9	85	31	76	30
New Brunswick .....	1,180	390	84	1,052	354	69	1,174	85	1,052	69	—	...	—	...
Quebec .....	12,313	481	86	10,435	410	81	11,004	93	9,544	84	643	50	562	82
Ontario .....	14,083	459	86	13,086	433	74	9,887	91	9,632	72	3,164	79	2,960	91
Manitoba .....	2,165	474	114	2,076	469	107	1,548	120+	1,512	120+	535	99	476	100
Saskatchewan.....	2,766	588	120+	2,041	465	120+	2,130	120+	1,393	107	604	120+	601	120+
Alberta .....	2,679	403	88	1,987	322	76	1,870	108	1,277	83	792	69	696	73
British Columbia.....	3,791	459	90	3,148	403	64	2,273	113	1,891	81	759	93	577	116

Source: Data derived from special tabulations provided by Dominion Bureau of Statistics, 1962.

## Conclusions

(i) The provinces show considerable differences in the direction and extent of change in the ratio of patients in institutions between 1932 and 1960. The ratio of hospital patients with mental retardation doubled, while that for psychoses increased 13 per cent.

(ii) Between 1955 and 1960 the average number of patients in mental hospitals decreased annually in British Columbia and Saskatchewan. The number of patients in hospitals for the mentally retarded increased in all provinces with such institutions. The national ratio for patients with psychoses decreased for those aged 20-69.

(iii) At the end of 1960 four out of 1,000 Canadians were under the care of psychiatric institutions. This ranged from 0.1 per cent of children to 1.1 per cent of those over the age of 65. One-half of all patients had been hospitalized for more than seven years.

(iv) Dominion Bureau of Statistics tabulations of patients on books are restricted by the limited data available and the analyses employed. Better data should be provided on patients in residence; personal, hospital, and diagnostic data from admission cards should be added to the census of patients on books; and longitudinal methods of analysis should be used.

## THE PROBLEM OF LONG-STAY PATIENTS

"The patients are as clean and neat as it is possible to keep them. They wear their own clothing, rather than depressing uniforms, and they obviously consider themselves patients rather than prisoners.

"As one doctor explained, 'They like it here. We treat them well, we take care of all of their needs and they have nothing to worry about. Many of them, especially the old folks, have nowhere else to go, anyway. They realize they're better off here than they would be outside.'"<sup>1</sup>

### Definition

This chapter describes some characteristics of long-stay patients on books of Canadian psychiatric institutions. Long-stay patients are those remaining continuously on the books for more than two years.<sup>2</sup> After two years of hospital care discharge rates decline markedly.

"... failure to leave hospital within two years, in spite of a better than even chance of doing so, made ultimate discharge extremely uncertain."<sup>3</sup>

### Factors Producing Social Breakdown and Prolonged Hospitalization

Many of the long-stay patients have had their disability *increased* by the process of hospitalization.

"Custodial care in the past has tended frequently to exacerbate or even cause the deterioration which has prevented acceptance by the community."<sup>4</sup>

A syndrome of 'institutional neurosis', produced by the hospitalization itself, is characterized by apathy, lack of initiative, loss of interest, submissiveness, apparent inability to make plans for the future, and loss of individuality. The probable causes include:<sup>5</sup>

Loss of contact with the outside world;  
Enforced idleness and loss of responsibility;

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<sup>1</sup>Myers, T. A., *Mental Hospitals in B.C.*, reprinted from a series of articles in the *Daily Colonist*, Victoria, B.C., January 1953, A Daily Colonist Pamphlet.

<sup>2</sup>Charron, K. C., The magnitude of chronic disease in Canada, *Can. J. publ. Hlth.* 52:273-284, 1961.

<sup>3</sup>Wanklin, J. M., *et al.*, Discharge and readmission among mental hospital patients, *Arch. Neurol. Psychiat.* 76:666-669, 1956.

<sup>4</sup>American Public Health Association, Program Area Committee on Mental Health, *Mental Disorders, A Guide to Control Methods*, *op. cit.*, p. 2.

<sup>5</sup>Barton, R., *Institutional Neurosis*, Bristol: John Wright & Sons Ltd., 1959, p. 12.

- Bossiness of medical and nursing staff;
- Loss of personal friends, possessions and personal events;
- Drugs;
- Ward atmosphere;
- Loss of prospects outside the institution.

In the past many of the above-listed characteristics of patients in mental institutions had been attributed to the psychiatric illness itself. Currently, it is recognized that these characteristics arise from the nature of the treatment, and that it may be the treatment which is pathogenic.

"Another problem arises in attempting to differentiate the natural course of the patient's illness from an adverse response to treatment."<sup>6</sup>

As the duration of hospitalization lengthens, the probabilities of discharge rapidly decrease. These reduced rates of discharge do not necessarily reflect severity of the patient's illness, but may indicate that there is an optimum time for discharge, and that once this time is passed, factors other than those of the illness itself may prevent discharge.<sup>7</sup> The low rates of discharge for long-stay patients indicate that the patient has attained the stage of social breakdown (produced by the institution) for which no alternatives but mental hospital care generally exist.

It has been recommended that patients, receiving long-term hospital care for physical illnesses, be reassessed frequently to ensure that suitable treatment is being provided and that continuing hospital care is necessary. The same principles would be appropriate for long-stay psychiatric patients.

"Cases are admitted for long-term hospital care because they need active treatment or extensive investigation. A good medical and social work-up should be obtained for all new admissions. Cases in hospital should be reassessed frequently to ensure that the best possible treatment is being provided and that continuing hospital care is necessary. A team approach has been found useful for this re-evaluation. It encourages close co-operation and understanding between the representatives of the various professions concerned with the medical, social and economic needs of the individual. It helps to ensure continuity of service."<sup>8</sup>

A 1957 survey of the medical needs of 3,555 Birmingham residents in mental hospitals indicated that approximately 13 per cent of the patients required investigation or active medical treatment, 42 per cent needed maintenance treatment, and 45 per cent were considered to require no medical treatment.<sup>9</sup>

The process of social breakdown is intensified for patients admitted with mental retardation. The majority of retarded patients can be cared for in the community. For those requiring hospital care, general nursing and medical care

<sup>6</sup>Schimmel, E. H., Editorial: The physician as pathogen, *J. chron. Dis.* 16: 1-4, 1963.

<sup>7</sup>World Health Organization, Third Report of the Expert Committee on Mental Health, *The Community Mental Hospital, WHO Tech. Rep. Ser.* 73, 1953.

<sup>8</sup>Charron, K. C., Chronic disease in the Canadian hospital program, *Can. J. pub. Hlth.* 48: 405-412, 1957.

<sup>9</sup>Garratt, F. N., Lowe, C.R., and McKeown, T., Investigation of the medical and social needs of patients in mental hospitals—Classification of patients according to the type of institution required for their care. *Brit. J. prev. soc. Med.* 11:165-173, 1957.



is needed for those with severe associated physical disabilities. Retarded patients in hospital without associated physical disability need assistance in functioning at their own level of intelligence and ability.<sup>10</sup> If this training is not provided, the hospital is impairing the patient's ability to function. Since these patients are admitted at an early age, they remain hospitalized longer than functional psychoses or psychoses of aging. With continued pressure for hospital admission from a community not providing alternative forms of care, a progressively increasing amount of hospital accommodation would be required for the mentally retarded.

### Prevention of Prolonged Hospitalization

Hospital treatment should aim at preventing prolonged hospitalization. Hospitalization leads to social breakdown from the way in which the environment is structured, and from the length of time that the patient is exposed to this environment.<sup>11</sup> For those patients requiring continuing care community alternatives should be provided. In order to provide these alternative services, a high degree of co-ordination and integration between psychiatric services and other relevant health, welfare, and rehabilitative facilities located in the community is needed.

"In general, two important weaknesses mark the institutional systems. Adequate provisions to prevent long-term institutional care are lacking, and early release now often depends as much upon the availability of community based services as it does on the patient's condition."<sup>12</sup>

Kramer<sup>13</sup> has emphasized that efforts must be made to prevent patients from slipping into the long-term groups by intensive treatment, frequent evaluations of patients' condition to determine who can best be served by the services of the mental hospital and who can best be served by other medical, nursing and rehabilitation services in the community and that it is particularly important for the persons in charge of hospital programs and those in charge of the community programs to collaborate closely in the planning of community facilities and services so that the changing needs of the mental hospital patients can be met effectively.

### Distribution of Long-stay Patients, 1960

#### *Time since Admission*

Less than one-fifth of long-stay patients had been admitted less than five years previously. Over 15,000 patients had been under continuous hospital care for 20 or more years.

#### *Age, Sex, and Type of Institution*

Overall, a higher proportion of males (71.3 per cent) than females (67.7 per cent) were long-stay patients. However, in hospitals for mentally retarded

<sup>10</sup>United States Department of Health, Education, and Welfare, Report of the Surgeon General's Ad Hoc Committee on Planning Mental Health Facilities, *Planning of Facilities for Mental Health Services*, op. cit., p. 17.

<sup>11</sup>American Public Health Association, Program Area Committee on Mental Health, *Mental Disorders, A Guide to Control Methods*, op. cit.

<sup>12</sup>Groving, F. T., and Lourie, N. W., Reconstructing community services for orthopsychiatric practice, *Amer. J. Orthopsychiat.* 33:747-750, 1963.

<sup>13</sup>Kramer, M., Trends of the Public Mental Hospital Population of the Nation, dupl., Washington: National Institute of Mental Health, 1963.

a higher percentage of females (82.0 per cent) than males (78.2 per cent) were long-stay patients.

TABLE 9-1

TIME SINCE ADMISSION, PATIENTS ON BOOKS OVER TWO YEARS, CANADA,  
DECEMBER 31, 1960

Time on books	Number	Percentage
All.....	52,531	100.0
2-5 years.....	9,871	18.8
5-10 years.....	12,354	23.5
10-20 years.....	14,617	27.8
20 + years .....	15,689	29.9

Source: Dominion Bureau of Statistics, *Mental Health Statistics, Supplement: Patients in Institutions, 1960, op. cit.*

In public mental hospitals the proportion of long-stay patients was lower in those under 35 years than in older patients. The 45-64 year age group had the highest proportion of long-stay patients with 80.9 per cent of males and 74.0 per cent of females being admitted more than two years earlier.

In hospitals for mentally retarded, the percentage of long-stay cases was markedly similar, 88.6 per cent to 89.8 per cent for males in all adult age groups. The ratio for females varied between 92.8 per cent and 94.7 per cent in the age groups 35 and over.

About three-fifths of all children were long-stay cases, with a slightly lower percentage for those in mental hospitals.

#### *Diagnosis,<sup>14</sup> Sex, and Type of Institution*

The proportion of long-stay cases was highest (75.4-79.4 per cent) among those diagnosed as schizophrenia and paranoid psychoses, mental retardation, and non-functional psychoses (excluding psychoses of the senium). Among patients on the books of public mental hospitals diagnosed as psychoneuroses, 41.8 per cent of males and 34.1 per cent of females were long-stay cases. The diagnoses of the patients may have changed subsequent to admission, or other factors may be involved.

The percentage of long-stay cases among patients diagnosed as mental retardation was similar in both public mental hospitals and hospitals for mentally retarded although the median stay varied.

#### *Public Mental Hospitals—Age, Sex and Diagnosis*

In public mental hospitals, the percentage of long-stay cases increased progressively with age for patients diagnosed as schizophrenia, manic depressive psychoses, and mental retardation. The proportion of long-stay cases was higher in patients with mental retardation than in those diagnosed as schizophrenia.

<sup>14</sup>These diagnoses were those made on admission.

TABLE 9-2  
PROPORTION OF PATIENTS ON BOOKS OVER 2 YEARS,  
BY SEX, AGE, AND TYPE OF INSTITUTION,  
CANADA, 1960

Sex	Age Group	All Institutions			Public Mental Hospitals			Hospitals for Mentally Retarded		
		All	2 years or more No.	%	All	2 years or more No.	%	All	2 years or more No.	%
Male	All ages	40,423	28,811	71.3	31,233	22,327	71.5	6,582	5,145	78.2
	0-14	3,434	2,044	59.5	680	350	51.5	2,727	1,689	61.9
	15-34	10,434	6,698	64.2	7,368	4,152	56.4	2,769	2,487	89.8
	35-44	6,619	4,671	70.6	5,596	3,949	70.6	530	474	89.4
	45-64	12,919	10,286	79.6	11,727	9,486	80.9	481	428	89.0
	65+	6,969	5,064	72.7	5,824	4,352	74.7	70	62	88.6
Female	All ages	35,020	23,720	67.7	27,420	18,412	67.1	5,948	4,878	82.0
	0-14	2,481	1,522	61.3	534	304	56.9	1,898	1,205	63.5
	15-34	7,915	4,788	60.5	5,203	2,677	51.5	2,330	2,060	88.4
	35-44	5,640	3,581	63.5	4,749	2,939	61.9	650	603	92.8
	45-64	11,401	8,426	73.9	10,174	7,531	74.0	864	818	94.7
	65+	7,548	5,368	71.1	6,733	4,934	73.3	198	184	92.9

Source: Data derived from special tabulations provided by Dominion Bureau of Statistics, 1962.

**TABLE 9-3**  
**PROPORTION OF PATIENTS ON BOOKS OVER 2 YEARS,**  
**BY SEX, DIAGNOSIS, AND TYPE OF INSTITUTION,**  
**CANADA, 1960**

Sex	Diagnosis	All Institutions			Public Mental Hospitals			Hospitals for Mentally Retarded		
		All	No.	%	All	No.	%	All	No.	%
Male	ALL DIAGNOSES .....	40,423	28,811	71.3	31,233	22,327	71.5	6,582	5,145	78.2
	Schizophrenia and paranoid psychoses .....	15,821	11,925	75.4	14,643	11,072	75.6	55	33	60.0
	Affective psychoses .....	2,359	1,406	59.6	2,172	1,350	62.2	3	2	66.7
	Psychoses of senium .....	2,193	1,019	46.5	1,856	854	46.0	1	1	100.0
	Other psychoses .....	4,456	3,430	77.0	4,086	3,199	78.3	84	55	65.5
	Psychoneuroses .....	722	220	30.5	500	209	41.8	—	—	—
	Mental retardation .....	11,755	9,332	79.4	5,594	4,489	80.2	6,126	4,821	78.7
	Epilepsy .....	980	703	71.7	672	478	71.1	237	183	77.2
	Other disorders of character behaviour, and intelligence .....	1,946	585	30.1	1,519	485	31.9	76	50	65.8
Female	ALL DIAGNOSES .....	35,020	23,720	67.7	27,420	18,412	67.1	5,948	4,878	82.0
	Schizophrenia and paranoid psychoses .....	12,869	9,006	70.0	12,295	8,695	70.7	226	198	87.6
	Affective psychoses .....	3,525	1,879	53.3	3,282	1,832	55.8	31	26	83.9
	Psychoses of senium .....	2,665	1,305	49.0	2,351	1,153	49.0	7	4	57.1
	Other psychoses .....	3,046	2,288	75.1	2,825	2,126	75.3	175	152	86.9
	Psychoneuroses .....	1,376	360	26.2	1,007	343	34.1	9	5	55.6
	Mental retardation .....	9,291	7,669	82.5	4,026	3,364	83.6	5,237	4,294	82.0
	Epilepsy .....	909	653	71.8	564	409	72.5	190	144	75.8
	Other disorders of character behaviour and intelligence .....	1,197	418	34.9	928	348	37.5	73	55	75.3

Source: Dominion Bureau of Statistics; *Mental Health Statistics, Supplement: Patients in Institutions, 1960*, op. cit.



**TABLE 9-4**  
**PROPORTION OF PATIENTS ON MENTAL HOSPITAL BOOKS OVER 2 YEARS,**  
**BY AGE, SEX, AND DIAGNOSIS, CANADA, 1960**

Sex	Age Group	All Psychoses			Schizophrenia			Manic Depressive			Psychoses of Senium			Mental Retardation		
		All	2 years or more		All	2 years or more		All	2 years or more		All	2 years or more		All	2 years or more	
			No.	%		No.	%		No.	%		No.	%		No.	%
Male	All ages	22,757	16,475	72.4	13,745	10,401	75.7	1,825	1,157	63.4	1,856	854	46.0	5,594	4,489	80.2
	0-14	31	8	25.8	20	3	—	2	1	—	—	—	—	580	325	56.0
	15-34	3,967	1,896	47.8	3,245	1,516	46.7	179	60	33.5	—	—	—	2,491	1,904	76.4
	35-44	4,047	2,881	71.2	3,069	2,211	72.0	271	152	56.1	5	1	—	940	804	85.5
	45-64	9,535	7,837	82.2	5,664	5,019	88.6	895	583	65.1	147	65	44.2	1,232	1,127	91.5
	65+	5,149	3,825	74.3	1,731	1,636	94.5	478	361	75.5	1,701	785	46.1	344	322	93.6
Female	All ages	20,754	13,806	66.5	11,295	7,887	69.8	2,470	1,454	58.9	2,351	1,153	49.0	4,026	3,364	83.6
	0-14	28	9	—	18	4	—	1	1	—	—	—	—	437	280	64.1
	15-34	2,664	1,028	38.6	2,027	779	38.4	236	65	27.5	2	1	—	1,662	1,350	81.2
	35-44	3,489	2,054	58.9	2,532	1,503	59.4	410	174	42.4	5	4	—	712	638	89.6
	45-64	8,455	6,269	74.1	4,780	3,816	79.8	1,104	679	61.5	119	47	39.5	915	815	89.1
	65+	6,093	4,421	72.6	1,923	1,770	92.0	714	530	74.2	2,224	1,100	49.5	299	280	93.6

Source: Data derived from special tabulations provided by Dominion Bureau of Statistics, 1962.

For patients diagnosed as psychoses of the senium, 46.0 per cent and 49.0 per cent of males and females respectively, had been under hospital care more than two years.

### Ratio of Long-stay Mental Hospital Patients by Age – Sex and Diagnosis

The ratio of long-stay female patients with functional psychoses was lower than for male patients. It is not known whether this reflects sex differences in the natural history of the illness, the attitudes towards illness, or earlier hospitalization at a less severe stage of the illness in females.

Among the 15-34 year age group, the ratio of long-stay patients with mental retardation was greater than that for schizophrenia. In the older age groups, the accumulation of long-stay patients with schizophrenia became more evident. This reflects the effectiveness of current treatment on recent admissions.

TABLE 9-5  
PUBLIC MENTAL HOSPITAL PATIENTS ON BOOKS OVER 2 YEARS,  
NUMBER, AND RATIO PER 100,000 POPULATION,  
BY DIAGNOSIS, SEX, AND AGE GROUP,  
CANADA, 1960

		Total	Male				
			0—14	15—34	35—44	45—64	65+
ALL DIAGNOSES .....	No.	22,327	350	4,152	3,949	9,486	4,352
	Ratio	247	11	161	339	601	670
All psychoses.....	No.	16,475	8	1,896	2,881	7,837	3,825
	Ratio	182	...	73	247	497	589
Schizophrenia .....	No.	10,401	3	1,516	2,211	5,019	1,636
	Ratio	115	...	59	190	318	252
Manic depressive psychosis	No.	1,157	1	60	152	583	361
	Ratio	13	...	2	13	37	56
Psychoses of the senium...	No.	854	—	—	1	65	785
	Ratio	9	—	—	...	4	121
Mental retardation .....	No.	4,489	325	1,904	804	1,127	322
	Ratio	50	11	74	69	71	50
			Female				
ALL DIAGNOSES .....	No.	18,412	304	2,677	2,939	7,531	4,934
	Ratio	210	10	107	252	497	720
All psychoses.....	No.	13,806	9	1,028	2,054	6,269	4,421
	Ratio	157	...	41	176	414	645
Schizophrenia.....	No.	7,887	4	779	1,503	3,816	1,770
	Ratio	90	...	31	129	252	258
Manic depressive psychosis	No.	1,454	1	65	174	679	530
	Ratio	17	...	3	15	45	77
Psychoses of the senium...	No.	1,153	—	1	4	47	1,100
	Ratio	13	—	...	...	3	160
Mental retardation .....	No.	3,364	280	1,350	638	815	280
	Ratio	38	10	54	55	54	41

Source: Data derived from special tabulations provided by Dominion Bureau of Statistics, 1962.

## Provincial Ratios of Long-stay Patients to Population, 1960

### Age—Sex

Nearly 3 of 1,000 Canadians had been continuously on the books of Canadian psychiatric institutions for more than two years.<sup>15</sup>

Higher proportions of males than females were long-stay patients in all provinces. The ratio increased progressively with age. Nearly 8 out of 1,000 Canadians over the age of 65 had been continuously under hospital care for more than two years.<sup>16</sup>

TABLE 9-6  
PATIENTS ON BOOKS OVER 2 YEARS,  
RATIO PER 100,000 POPULATION, BY SEX AND AGE,  
CANADA AND PROVINCES, 1960

	Total	Male				
		0-14	15-34	35-44	45-64	65+
CANADA.....	319	67	259	401	652	779
Newfoundland.....	155	—	91	292	485	500
Prince Edward Island.....	257	—	118	411	670	640
Nova Scotia.....	77	30	71	94	152	108
New Brunswick.....	273	15	213	468	696	574
Quebec.....	336	55	301	495	745	807
Ontario.....	333	92	274	371	623	812
Manitoba.....	368	60	281	513	722	798
Saskatchewan.....	464	79	293	540	918	1,292
Alberta.....	278	55	215	319	680	574
British Columbia.....	323	93	238	315	550	823
Female						
CANADA.....	270	52	192	307	556	783
Newfoundland.....	112	1	48	178	392	465
Prince Edward Island.....	207	—	61	310	535	600
Nova Scotia.....	69	28	69	63	126	125
New Brunswick.....	234	9	144	355	552	779
Quebec.....	277	45	219	364	637	765
Ontario.....	294	69	207	282	548	845
Manitoba.....	351	44	192	453	733	980
Saskatchewan.....	356	56	225	453	750	1,030
Alberta.....	220	49	143	274	556	557
British Columbia.....	258	75	185	215	376	848

Source: Based on Appendix 9-2.

<sup>15</sup>In mid-1931, 2.4 out of 1,000 Canadians had been in hospital for more than 18 months. Appendix 9-1.

<sup>16</sup>A Danish study concluded that most elderly people with mental illness are treated best and most practically in their homes with close cooperation between their general practitioner and a psychiatrist and with the possibility of offering psychiatric treatment to them if needed while they are in hospital for somatic illness. Nielsen, J., Geriatric-psychiatric investigation within a geographically delimited population group. Report on the Thirteenth Congress of Scandinavian psychiatrists, *Acta psychiat. scand.* 39, Suppl. 169:203-205, 1963.

FIGURE 9-1

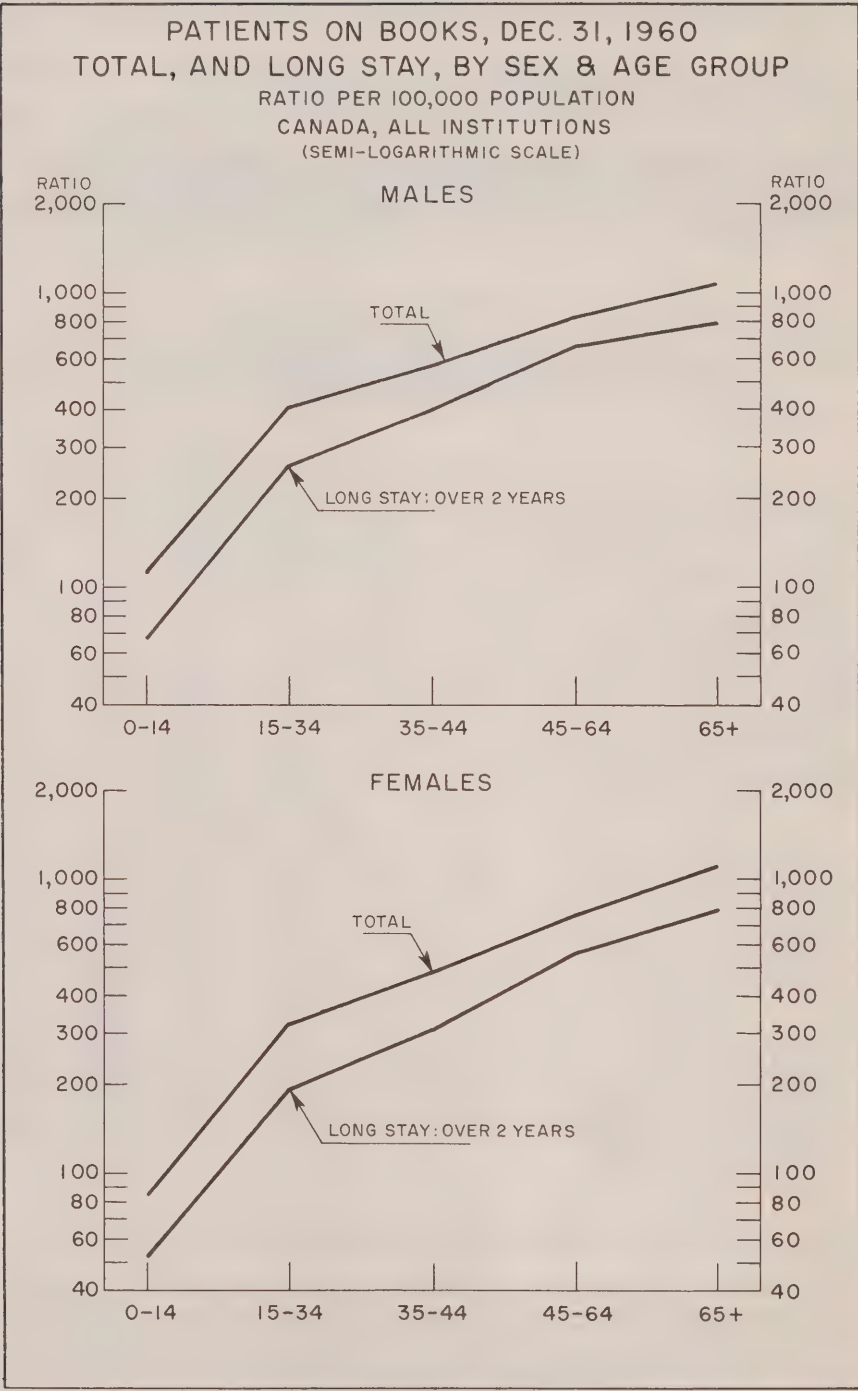




TABLE 9-7  
PATIENTS ON BOOKS OVER 2 YEARS,  
BY TYPE OF INSTITUTION AND DIAGNOSTIC GROUP,  
NUMBER AND RATIO PER 100,000 POPULATION,  
CANADA AND PROVINCES, 1960

	Public Mental Hospitals						Hospitals for Mentally Retarded	
	ALL DIAG-NOSES	Schizophrenia and Paranoid Psychoses	Affective Psychoses	Psychoses of Senium	Other Psychoses	Mental Retarda-tion	ALL DIAG-NOSES	Mental Retarda-tion
CANADA.....	40,739 228	19,767 111	3,182 18	2,007 11	5,325 30	7,853 44	10,023 56	9,115 51
Newfoundland.....	618 138	287 64	104 23	45 10	66 15	90 20	—	—
Prince Edward Island .....	239 232	104 101	36 35	8 8	47 46	28 27	—	—
Nova Scotia .....	430 59	199 27	10 1	34 5	51 7	128 18	99 14	99 14
New Brunswick.....	1,522 258	733 124	113 19	59 10	162 28	328 56	—	—
Quebec.....	14,386 280	4,979 97	1,326 26	302 6	2,004 39	4,582 89	801 16	647 13
Ontario.....	13,338 218	7,044 115	1,028 17	830 14	1,793 29	1,804 30	5,017 82	4,458 73
Manitoba .....	2,333 258	1,625 179	137 15	96 11	309 34	83 9	890 98	875 97
Saskatchewan .....	2,634 288	1,620 177	140 15	284 31	272 30	230 25	1,114 122	1,072 117
Alberta .....	2,155 167	1,525 118	133 10	64 5	278 22	92 7	1,050 81	949 74
British Columbia .....	3,084 193	1,651 103	155 10	285 18	343 21	488 30	1,052 66	1,015 63

Source: Data derived from special tabulations provided by Dominion Bureau of Statistics, 1962.

There were wide provincial variations in the sex-age specific ratios for long-stay patients (see Appendix 9-2) with Saskatchewan having the highest over-all ratios, followed by Manitoba.<sup>17</sup>

### *Diagnostic Group*

Similar marked differences occurred in the provincial ratios of long-stay patients for various diagnostic groups. These marked interprovincial variations indicate the effects of admission policies and treatment programmes of the past, and differences in the current availability of alternative methods of care.

### **Conclusions**

(i) Nearly three out of 1,000 Canadians were long-stay patients in psychiatric institutions at the end of 1960, having been admitted more than two years previously. Among the aged this ratio reached 0.8 per cent.

(ii) For 52,531 long-stay patients of all ages separation by death was more likely than discharge. Over 15,000 patients had been under continuous hospital care for more than 20 years.

(iii) Seven-tenths of patients were long-stay. This proportion was higher in institutions for the mentally retarded than in mental hospitals. Among long-stay patients aged 15-34 in mental hospitals, there were more cases of mental retardation than of psychosis.

(iv) Many of the long-stay patients have had their disability increased by the hospitalization itself. Frequent assessment is necessary to assure that suitable care is being provided and that continuing hospital care is necessary.

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<sup>17</sup> It is emphasized that these high ratios of long-stay patients represent the patients accumulated from admissions over many previous years. Although Saskatchewan had a high over-all ratio of patients remaining two years or more, it was below the national average in ratio of patients entering the two- to three-year stay group for all age groups below the age of 65 (See Appendix 9-3).

## RETENTION OF PATIENTS IN PSYCHIATRIC INSTITUTIONS

“..the moment the individual is forgotten in a herd, his chance of improvement has practically gone.”<sup>1</sup>

### Introduction

#### *Purpose of Chapter*

One hundred years ago, C. L. Robertson described the requirements for the longitudinal study of insanity:

“We seek the numerical history of each hundred cases of insanity traced from the day when the disease first shewed itself, to its resolution in recovery or death. We want to know not merely the age on admission, the then duration of the disorder, but farther, its history and progress, with the influence of age, sex, occupation, social relations on the incubation, progress and result of the disease.”<sup>2</sup>

What happens to patients in psychiatric institutions? Statistics on various aspects of patient movement in the preceding chapters did not describe the longitudinal hospital history for groups of patients admitted to hospital.

What proportion of admissions or residents remain continuously under hospital care for two or five years? What proportions have left by discharge, or by death? What are the relationships between the elapsed lengths of hospital care and the frequencies of discharge or death? Various methods of determining some of these relationships are described in this chapter.

#### *Definition of Retention*

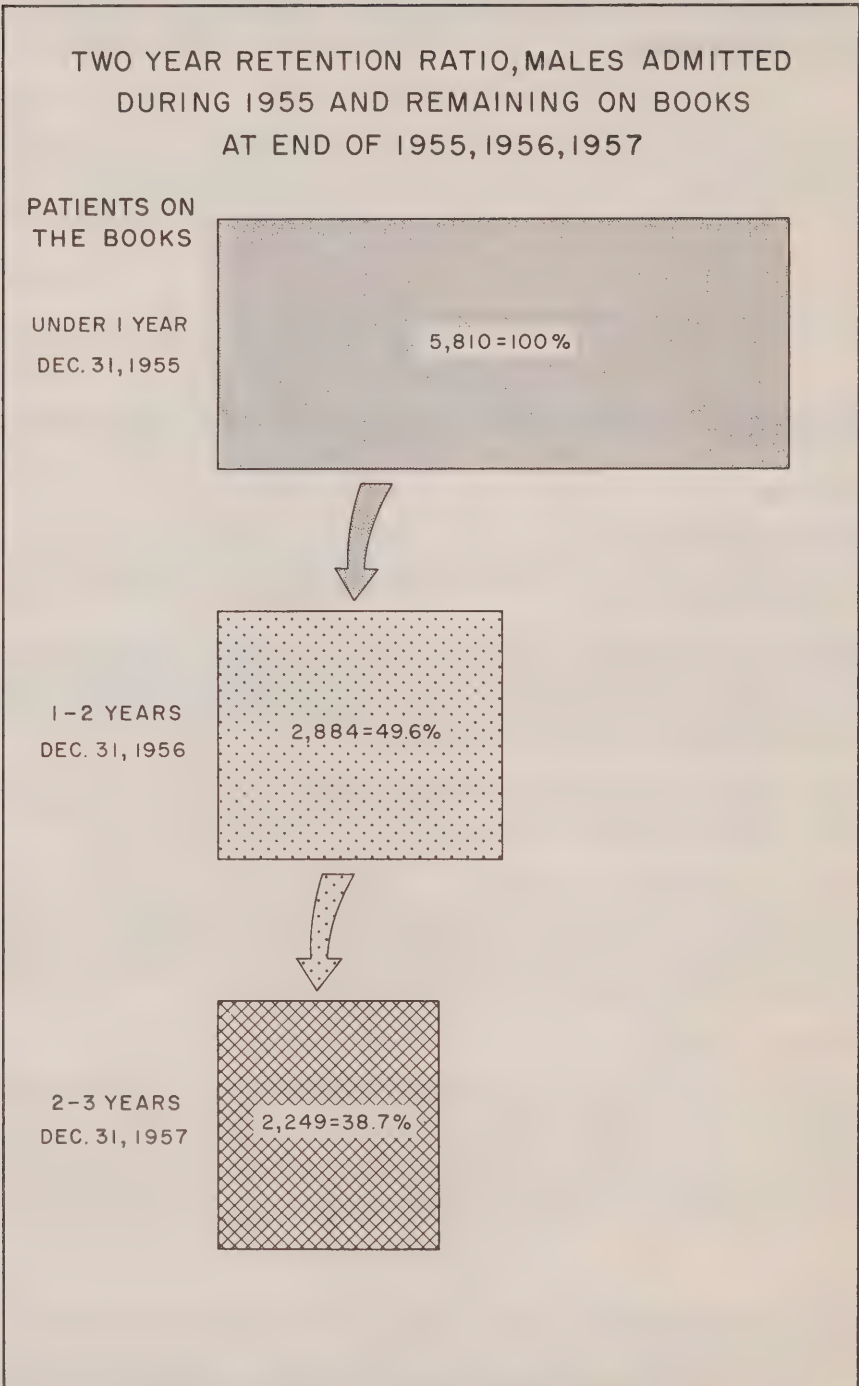
Retention refers to the process of remaining under continuous hospital care. In addition to actuarial estimates of retention rates, *retention ratios* are calculated. These ratios represent the proportion of patients remaining under hospital care at the end of various calendar years after the year of admission. The number of patients remaining on hospital books at the end of a specific year after admission may be used as a denominator for calculating the proportion

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<sup>1</sup>Canadian National Committee for Mental Hygiene, Mental hygiene survey of the Province of British Columbia, *op. cit.*

<sup>2</sup>Robertson, C. L., *op. cit.*

FIGURE 10-1





remaining at the end of two or five additional years. Retention ratios are discussed further in Richman and Kennedy.<sup>3</sup>

The denominator of patients on the books at the end of a year represents unduplicated persons. From existing DBS publications it is possible to form cohorts specific for various diagnostic categories or age groups. With appropriate tabulations of the same punch-card records it would be possible to form cohorts of specific sex and diagnostic composition, characterized by birth year, and determine longitudinal retention of these patients.<sup>4</sup>

These retention ratios relate to the proportion of patients on books remaining under continuous hospital care.<sup>5</sup> Although the retention ratios do not differentiate whether the decrement was due to death, discharge or transfer, they do provide a means of following those patients utilizing continuous hospital care and constituting the long-stay population.

The same method has been applied in education to estimate from routine statistics the number of students continuing in formal schooling to a certain level expressed as a ratio of the grade enrolment for any selected lower level.

"The number of 8-year olds enrolled in a school system in 1948-49 was . . . taken as the base population. By examining the grade distribution of 11-year olds in 1951-52, 12-years olds in 1952-53 . . . it was possible to get a fairly good indication of the number and percentage of students in this cohort who remained in the system to successive grades . . .".<sup>6</sup>

### Twenty-five-year Retention of Patients from 1931

Over one-quarter (29 per cent) of the Canadian patients hospitalized for 17 or more months at June 1, 1931, remained continuously on the books of psychiatric institutions for over twenty-five years. Among the 7,086 patients remaining from before 1930 to the end of 1955 one-half were diagnosed as functional psychoses, and one-quarter as mental retardation. It is emphasized that this estimate is based on those residents hospitalized for at least 17 months, and not on a cohort of admissions.

### Five- and Ten-year Retention of Patients from 1950, by Province

At the end of 1950, 58,844 patients were reported on the books of Canadian institutions submitting schedules to DBS. By the end of 1955, there were 39,548 patients reported as having remained continuously on the books of card-reporting institutions for more than five years; and at Dec. 31, 1960, there were 30,306 patients who had been admitted more than ten years previously. Patients on the books for over ten years at the end of 1960 included some of those individuals who had been on the books over five years at the end of 1955, or who had been reported on the books at the end of 1950.

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<sup>3</sup>Richman, A., and Kennedy, Peggy, Estimating longitudinal changes in the number of patients hospitalized in Canadian psychiatric institutions, *Acta psychiat. scand.*, 41:177-203, 1965.

<sup>4</sup>Richman, A., *Mental Hospitals in Canada, 1955-1962*, unpublished data.

<sup>5</sup>It is emphasized that these are different from discharge rates for groups of admissions.

<sup>6</sup>Dominion Bureau of Statistics, *Student Progress through the Schools by Grade*, Ottawa: Queen's Printer, 1960.

FIGURE 10-2

CONTINUOUS RETENTION OF PATIENTS  
ON THE BOOKS DEC. 31, 1950  
CANADA, ALL INSTITUTIONS

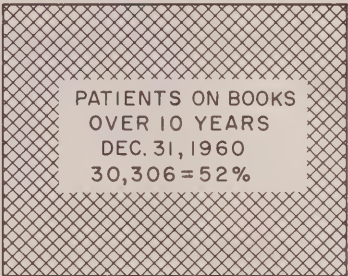
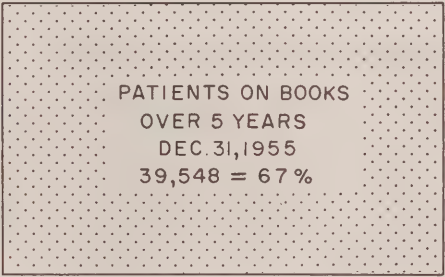
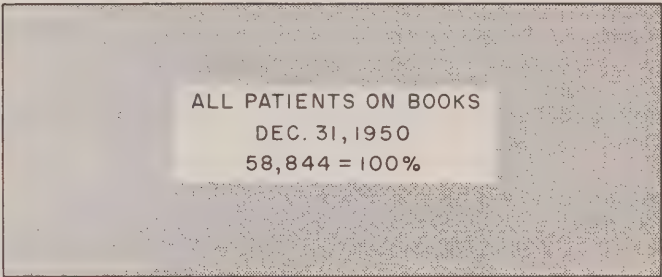


TABLE 10-1  
ESTIMATE OF TWENTY-FIVE YEAR RETENTION OF RESIDENTS IN  
CANADIAN PSYCHIATRIC INSTITUTIONS, JUNE 1, 1931,  
WHO WERE ADMITTED BEFORE 1930

Patients in residence June 1, 1931 admitted before December, 1929 .....	24,601 = 100%
Patients on books December 31, 1955 admitted before 1930	7,086 = 29%

Source: Dominion Bureau of Statistics, *Seventh Census of Canada 1931*, Vol IX, Institutions,  
*op. cit.*, p. 254.  
Dominion Bureau of Statistics, special tabulations.

Nationally the five-year retention of patients on books at the end of 1950 is estimated as 67 per cent.<sup>7</sup> There were slight interprovincial<sup>8</sup> variations from 66 per cent in Saskatchewan to 76 per cent in British Columbia.

TABLE 10-2  
FIVE AND TEN YEARS RETENTION OF PATIENTS ON BOOKS OF PSYCHIATRIC  
INSTITUTIONS, CANADA AND PROVINCES, DEC. 31, 1950

All Institutions	Patients on Books Dec. 31, 1950	Patients on Books over 5 Years Dec. 31, 1955	Patients on Books over 10 Years Dec. 31, 1960	Percentage of Patients on Books December 31, 1950, Remaining con- tinuously on Books	
				5 Years to End of 1955	10 Years to End of 1960
Canada.....	58,844	39,548	30,306	67	52
Newfoundland.....	688	497	362	72	53
Prince Edward Island <sup>1</sup> .....	289	321	165	...	...
Nova Scotia <sup>1</sup> .....	2,493	102	157	...	...
New Brunswick.....	1,628	1,094	879	67	54
Quebec.....	16,995	12,082	9,043	71	53
Ontario.....	20,049	13,550	10,612	68	53
Manitoba.....	3,472	2,474	2,020	71	58
Saskatchewan.....	4,822	3,197	2,540	66	53
Alberta.....	3,433	2,437	1,841	71	54
British Columbia.....	4,975	3,794	2,687	76	54

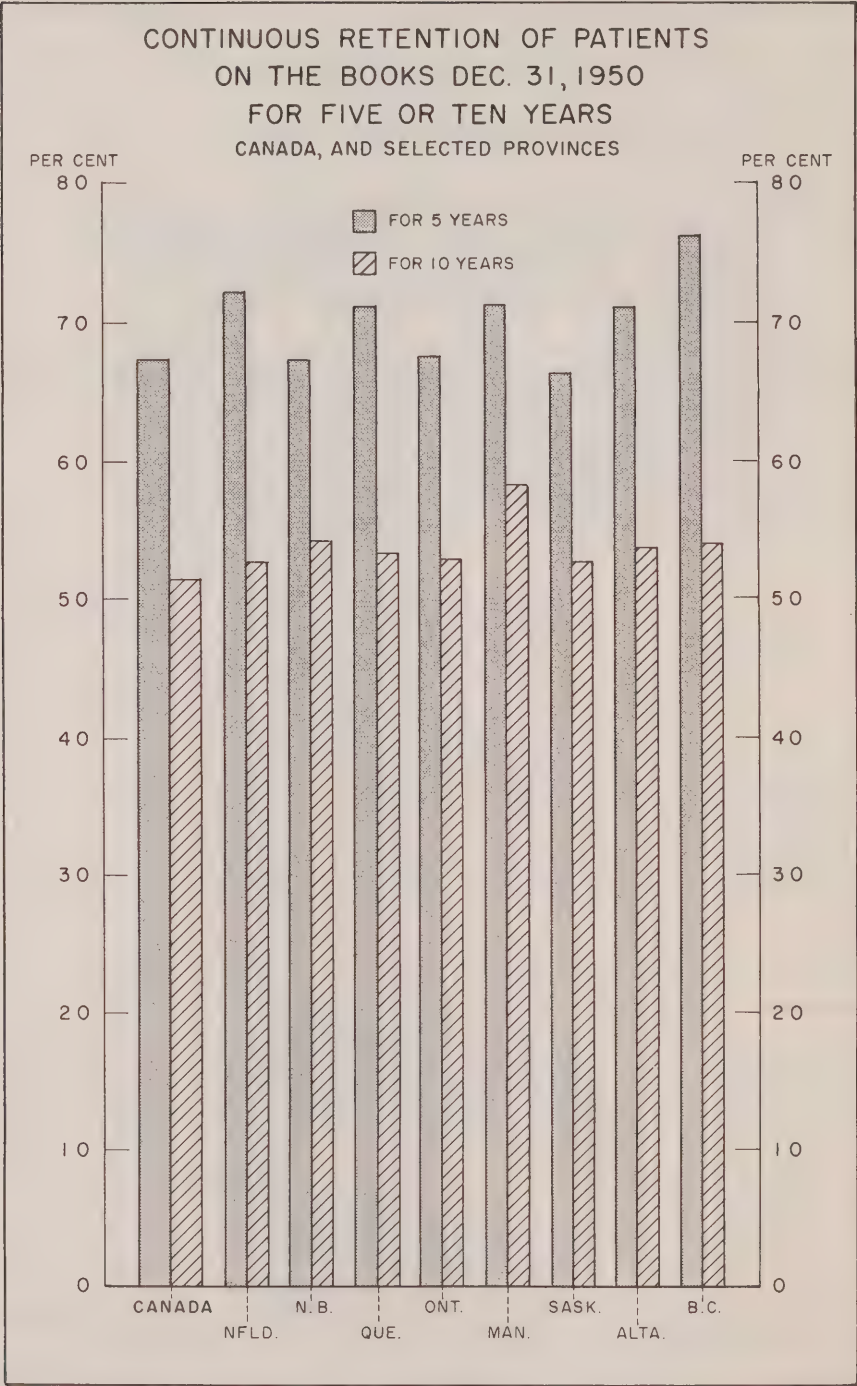
<sup>1</sup>The number of institutions submitting card reports in Prince Edward Island and Nova Scotia varied in 1950 and 1960.

Source: Dominion Bureau of Statistics, *Mental Institutions, 1950*, Schedule reports;  
Dominion Bureau of Statistics: *Supplement, Patients in Institutions 1955-1957*, *op. cit.*,  
pp. 49-53;  
Dominion Bureau of Statistics: *Supplement, Patients in Institutions, 1960*, *op. cit.*,  
pp. 33-36, 40, 42.

<sup>7</sup>Since the denominator of patients on the books December 31, 1950 included some non card-reporting institutions, excluded from subsequent numerators, the percentage of patients on books retained continuously on the books for at least five or ten years is underestimated.

<sup>8</sup>Provinces with marked fluctuations in card reporting (Nova Scotia and Prince Edward Island) are excluded.

FIGURE 10-3





The estimated ten-year retention of patients on books at Dec. 31, 1950, was 52 per cent nationally. Provincial ratios ranged from 53 per cent in Newfoundland to 58 per cent in Manitoba. Thus, at least *one-half* of the patients on the books of Canadian psychiatric institutions at the end of 1950 remained continuously on books for *ten* years.

In view of the marked provincial differences in patient characteristics and accommodation, it is striking that *seven* of the provinces had ten-year retention ratios of 53 or 54 per cent. Provinces with similar retention ratios may have discharge rates which were markedly different. It is not possible to differentiate whether a low retention ratio was produced by high death rates or high discharge rates.

Five-year Retention of Patients from Dec. 31, 1955

More detailed analyses may be made of the five-year retention ratios for patients on books of card-reporting institutions at the end of 1955, since data are available for 1955 and 1960 on years since admission by province, and by diagnostic groups nationally.

Provincial Differences by Time since Admission

Sixty-three per cent of all patients on books at the end of 1955 were retained continuously for five years.<sup>9</sup> This five-year retention ratio increased from 44 per cent for those hospitalized less than five years to 73 per cent for those hospitalized five to ten years, and 78 per cent for those hospitalized ten years or more.

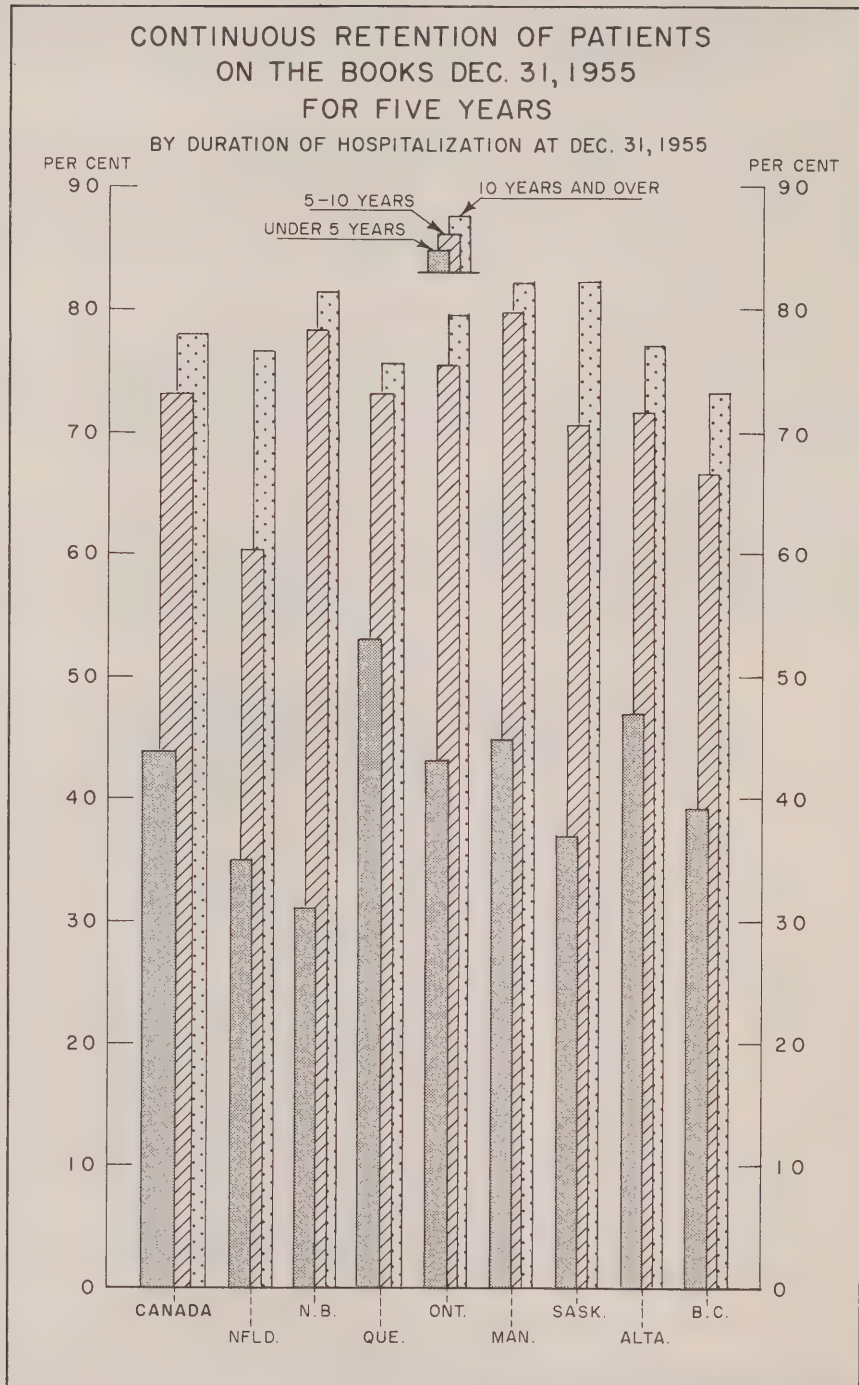
TABLE 10-3  
FIVE-YEAR RETENTION BY TIME SINCE ADMISSION  
OF PATIENTS ON BOOKS OF PSYCHIATRIC INSTITUTIONS,  
CANADA AND SELECTED PROVINCES, DEC. 31, 1955<sup>1</sup>

Region	Years since Admission, December 31, 1955								
	Under 5			5-10			10 and Over		
	N= 100%	Retained to Dec. 31, 1960		N= 100%	Retained to Dec. 31, 1960		N= 100%	Retained to Dec. 31, 1960	
		No.	%		No.	%		No.	%
CANADA	27,977	12,354	44	11,415	8,352	73	28,133	21,954	78
Newfoundland.....	424	149	35	116	70	60	381	292	77
New Brunswick .....	1,106	343	31	345	270	78	749	609	81
Quebec .....	7,268	3,847	53	3,563	2,604	73	8,519	6,439	76
Ontario .....	10,485	4,533	43	4,013	3,025	75	9,537	7,587	80
Manitoba .....	1,442	651	45	520	415	80	1,954	1,605	82
Saskatchewan.....	1,733	639	37	752	530	70	2,445	2,010	82
Alberta .....	1,724	811	47	658	471	72	1,779	1,370	77
British Columbia .....	2,898	1,142	39	1,318	876	66	2,476	1,811	73

<sup>1</sup>Based on card-reporting institutions. Data for Canada include data from Prince Edward Island and Nova Scotia.  
Source: Dominion Bureau of Statistics, *Mental Health Statistics, Supplement: Patients in Institutions, 1955-1957; and 1960.*

<sup>9</sup>Compare the five-year retention ratio of 67 per cent for all patients on books at the end of 1955.  
Similar results were reported from Denmark, where 58 per cent of the patients in the institutions in 1957 were hospitalized five years later. Juel-Nielsen, N., and Stromgren, E., Five-years later, *Acta Jutland. Med. Ser.* 13, 35(1), 1963.

FIGURE 10-4



The provincial retention ratios ranged from 31 per cent to 53 per cent for patients hospitalized less than five years, from 60 per cent to 80 per cent for those hospitalized between five to ten years, and from 73 per cent to 82 per cent for patients hospitalized ten years or more.

The greater variation in provincial retention ratios for patients hospitalized less than ten years is a reflection of differences in discharge and death rates due to such factors as differences in patient composition, treatment programmes and availability of alternative forms of care.

For patients admitted more than ten years previously, provincial retention ratios varied less. Four provinces, each having retention ratios between 76 per cent to 80 per cent, had marked differences in budget, personnel and treatment programmes. These differences in programme and budget seem to have relatively little effect upon the retention ratios of patients hospitalized for more than ten years.

*Diagnostic Differences by Time since Admission*

Two-thirds of all patients diagnosed as schizophrenia or paranoid psychoses were retained continuously for five years in comparison to one-quarter of psychoses of the senium and four-fifths of patients with mental retardation.

With the exception of psychoses of the senium, the five-year retention ratios for various psychoses differed less than 5 per cent between those hospitalized 5 to 10 years, and those hospitalized 10 years and over. With increasing length of hospital stay, the retention ratio for affective psychoses approached that for schizophrenia and paranoid psychoses. It was noted previously that the diagnoses are those made on admission and the diagnostic evaluation of these patients may have changed.

For patients diagnosed as mental retardation, five-year retention ratios were 76 per cent for those admitted less than five years previously and 81 per cent for those admitted more than five years previously. These patients with mental retardation are younger than patients with psychoses, and patients remaining in hospital would be less rapidly diminished by death than would the long-stay groups for other diagnoses who have an older age composition.

*Estimated Number of Deaths between 1955 and 1960*

Of the 67,525 patients on the books of Canadian psychiatric institutions at the end of 1955, 42,660 remained continuously on the books for five years. Among the 24,865 patients who had left hospital during this five-year period, it is estimated that at least *one-third* (N=8,656) had died in hospital during 1956-1960.<sup>10</sup>

<sup>10</sup>The number of 8,656 deaths was estimated from tabulations giving the durations of hospital stay for card-reported deaths during 1956-1960.

Deaths during 1956-60 with 5 + years of care .....	6,713
Deaths during 1956 with 1-5 years of care .....	856
Deaths during 1957 with 2-5 years of care .....	605
Deaths during 1958 with 3-5 years of care .....	314
Deaths during 1959 with 4-5 years of care .....	168
Total	8,656

TABLE 10-4  
FIVE-YEAR RETENTION BY DIAGNOSTIC GROUP OF PATIENTS ON BOOKS OF PSYCHIATRIC INSTITUTIONS,  
BY TIME SINCE ADMISSION, CANADA, DEC. 31, 1955

Diagnostic Group	Years since Admission, December 31, 1955									
	All Patients			Under 5		5 - 10			10 and Over	
	N=100%	Retained to Dec. 31, 1960		N=100%	Retained to Dec. 31, 1960	N=100%	Retained to Dec. 31, 1960		N=100%	Retained to Dec. 31, 1960
		No.	%				No.	%		%
ALL DIAGNOSES.....	67,525	42,660	63	27,977	12,354	44	8,352	73	28,133	21,954
Schizophrenia & Paranoid psychoses.....	27,318	18,089	66	9,173	3,833	42	3,286	76	13,820	10,970
Affective psychoses.....	5,817 <sup>1</sup>	2,625	45	2,989	734	25	563	63	1,938	1,328
Psychoses of senium.....	4,434 <sup>1</sup>	1,071	24	3,438	708	21	193	31	368	170
Other psychoses.....	7,593	4,810	63	2,570	1,197	47	1,154	69	3,359	2,459
Mentally retarded <sup>2</sup> .....	16,506	13,113	79	6,143	4,699	76	2,576	81	7,200	5,838

<sup>1</sup> Correction of error in *Mental Health Statistics, Supplement, Patients in Institutions, 1955 - 1957*, p. 56, for total number diagnosed as involutional melancholia and psychoses of senium.

<sup>2</sup> Excludes mental deficiency with epilepsy.

Source: Dominion Bureau of Statistics *Mental Health Statistics: Supplement, Patients in Institutions 1955 - 57*, p. 56; 1960, p. 43.



FIGURE 10-5

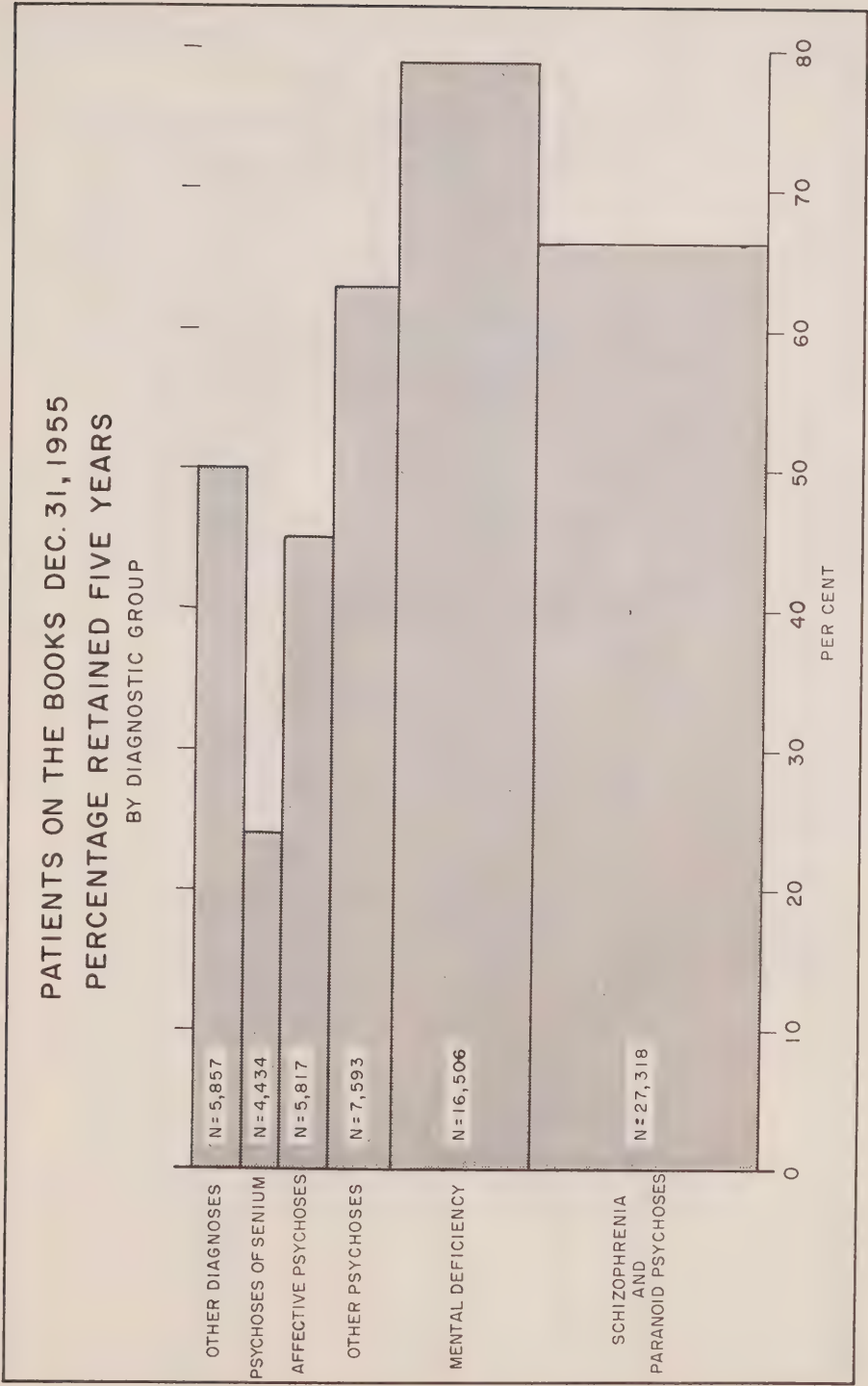


FIGURE 10-6

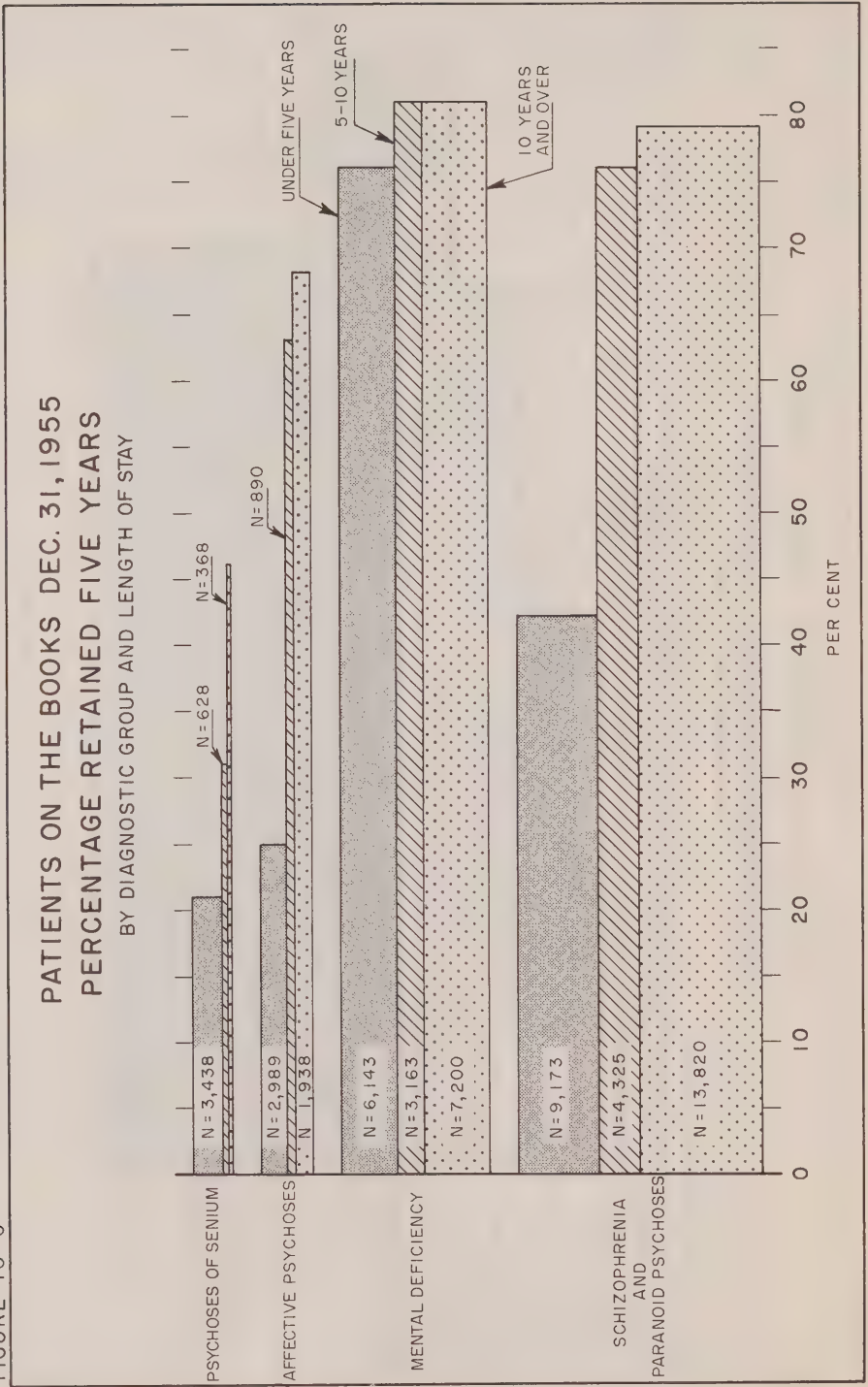
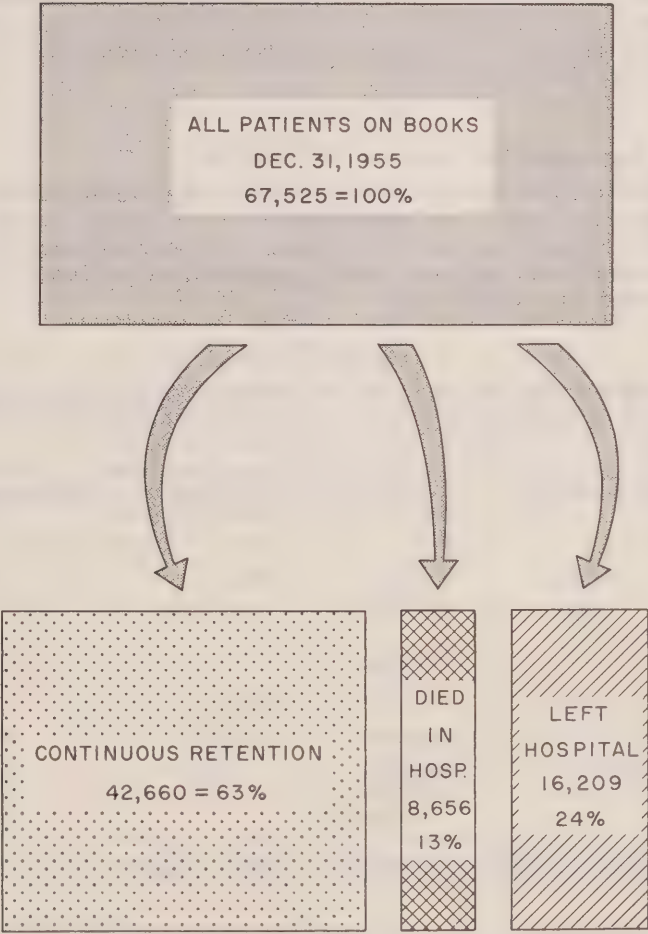


FIGURE 10-7

PATIENTS ON BOOKS, DEC. 31, 1955  
DISPOSITION WITHIN FIVE YEARS



Among a total of 67,525 patients on the books of Canadian psychiatric institutions at the end of 1955:

- less than one-quarter had been discharged alive during the next five-year period;
- five-eighths remained continuously on the books for five years;
- at least one-eighth died in hospital within five years.

From the 39,548 patients at the end of 1955 who had been admitted before 1950, there were 30,306 retained continuously to the end of 1960. Between 1955 and 1960, 9,242 individuals had left hospital and the *minimum* estimate of the number of deaths in hospital (based on the number of deaths during 1956-60 of patients with over ten years of hospital care) is 4,702. Thus, among the patients on books for more than five years at the end of 1955, at least one-eighth had died, less than one-eighth had been discharged, and three-quarters remained on the books by the end of 1960.

#### *Continuous Hospitalization between 1955 and 1960*

The 42,660 patients retained continuously on the books between 1955-1960 represent the hold-over from admissions of many earlier years. The total amount of continuous time on the books is estimated as over 600,000 years. This is a minimum estimate since patients admitted before January 1, 1941, are assigned a mean stay of 20 years.

TABLE 10-5

MINIMUM ESTIMATE OF YEARS OF CONTINUOUS HOSPITAL CARE  
FOR PATIENTS ON BOOKS MORE THAN FIVE YEARS, CANADA, DECEMBER 31, 1960

Period Admitted	Number	Estimated Mean Time (Years) on Books, to December 31, 1960	Total Years of Continuous Hospital Care
Jan. 1, 1951—Dec. 31, 1955 .....	12,354	7½	92,655.0
Jan. 1, 1946—Dec. 31, 1950 .....	8,352	12½	104,400.0
Jan. 1, 1941—Dec. 31, 1951 .....	6,265	17½	109,637.5
Before Jan. 1, 1941 .....	15,689	20	313,780.0
Total .....	42,660		620,472.5

Source: Dominion Bureau of Statistics, *Mental Health Statistics, Supplement: Patients in Institutions, 1960*.

The costs of hospital care for these 42,660 patients continuously hospitalized between 1956 to 1960 is estimated in Appendix 10-1 as over \$282.6 million for the five-year period. The personal and diagnostic characteristics of this group of patients continuously retained between 1955 and 1960 are detailed in Table 10-6. On the basis of the 1955-1960 experience that three-fourths<sup>11</sup> of the patients who

<sup>11</sup> Among the 10,466 separations with more than five years of hospital care during 1956-60, about one-third (N=3,753) had left by discharge and the remaining two-thirds by death.



had been on the books for over five years at the end of 1955 were continuously retained an additional five years (Table 10-3), one may estimate that about 30,000 of these 42,660 patients (admitted before 1956) would remain continuously on the books until 1965 *unless* marked changes occurred in death rates, treatment programmes, discharge policies, or provision of facilities for community care. At a per diem cost of \$5.00, an additional five years of continuous hospital care for 30,000 patients would amount to \$273.8 million.

TABLE 10-6  
PERSONAL AND DIAGNOSTIC CHARACTERISTICS  
OF PATIENTS CONTINUOUSLY HOSPITALIZED,  
CANADA, DEC. 31, 1955 - DEC. 31, 1960

PERSONAL CHARACTERISTICS				
Age in Years	Total	Male	Female	
TOTAL .....	42,660	23,587	19,073	
Under 15 .....	1,781	1,056	725	
15-34 .....	8,801	5,184	3,617	
35-44 .....	6,947	3,962	2,985	
45-64 .....	16,569	9,150	7,419	
65+ .....	8,493	4,196	4,297	
Age not stated .....	69	39	30	

DIAGNOSTIC CHARACTERISTICS				
Year Admitted	ALL DIAGNOSES	Schizophrenia and Paranoid Psychoses	Other Psycho- ses (affective, senile, etc.)	Mental Retardation
before 1956	42,660	18,089	8,506	13,113
1951-1955	12,354	3,833	2,639	4,699
1946-1950	8,352	3,286	1,910	2,576
1941-1945	6,265	2,714	1,290	1,819
before 1941	15,689	8,256	2,667	4,019

Source: Dominion Bureau of Statistics, special tabulations and *Mental Health Statistics 1960*, p. 43.

Two-year Retention Ratios among Patients Admitted 1955-1959

Method of Calculation

Changes in the proportion of individuals admitted during the year who remained on the books at the end of the same year are difficult to evaluate. The ratio of individuals on books at the end of the year to the number of admission-events during the year are not comparable from year to year, since the number of unduplicated individuals among those admission-events varies due to the increasing percentage of readmissions during this time (see Appendix 10-2).

However, it is possible to estimate the frequency of retention for unduplicated *patients on books*<sup>12</sup> of card-reporting institutions. By rearrangement of tabulations in the DBS annual series, *Patients in Institutions*, it is possible to determine the retention of a group of unduplicated individuals.<sup>13</sup>

Two-year retention ratios refer to the proportion of patients remaining on the books at the end of the year during which they were admitted, who remained continuously on the books at the end of two calendar years after the year of admission. A two-year period of retention was selected in order to provide some estimate of the proportion of patients becoming long-stay.

It is emphasized that these retention ratios:

do not describe the type of separation;  
are based upon patients remaining on books at the end of the year of admission,  
rather than on admissions, and that  
some of the patients remaining on books may not be hospitalized.

At the end of 1955 there were 5,810 males on the books who had been admitted less than one year previously, that is during 1955; at the end of 1956 there were 2,884 males on the books who had been admitted from 1 to 2 years previously (during calendar year 1955); and at the end of 1957 there were 2,249 males on the books who had been admitted two to three years previously (during calendar year 1955). Thus, one can calculate that among 5,810 individual males who were admitted during 1955 and remained on the books at the end of 1955, 2,884 or 49.6 per cent remained on the books at the end of 1956, and 2,249 or 38.7 per cent remained on the books at the end of 1957 (see Figure 10-1).

Similar estimates may be made for various diagnostic and age-sex groups, and for all patients reported from individual provinces. Patients may be followed for one and two calendar years after the year of admission; subsequently, time since admission is grouped in two- and five-year periods. Appendix 10-3 contains the basic data for calculating these retention ratios.

Detailed characteristics of patients on the books at the end of the year of admission were available for patients admitted during 1960. Nearly 80 per cent of these patients were reported from public mental hospitals, and 8 per cent were in hospitals for mentally retarded. Thirty-three per cent were diagnosed as schizophrenia, 15 per cent as mental retardation, and 10 per cent as psychoses of the senium. Psychoneuroses formed less than 8 per cent of all patients, and 60 per cent of the psychoneuroses were on the books of public mental hospitals (Appendix 10-4).

#### *Trends in Retention Ratios, 1955-1959*

Overall the retention ratios were lower for females than males, and lower for patients admitted in 1959 than for those admitted in 1955. For males the two-year retention ratio decreased from 38.7 per cent for those admitted in 1955 to 32.2 per cent for those admitted in 1959; for females, the retention ratio decreased from 32.2 per cent to 27.4 per cent.<sup>14</sup>

<sup>12</sup> It is highly unlikely that a person would be reported on books of more than one institution.

<sup>13</sup> This method is similar to that used by W. H. Frost in analyzing tuberculosis mortality in successive decades for persons grouped by year of birth. Frost, W. H., The age selection of mortality from tuberculosis in successive decades, *Am. J. Hyg.* 30:91-96, 1939.

<sup>14</sup> Similar improvement was evident for the one year retention ratios of those remaining on books at the end of the calendar year *subsequent* to the year of admission, that is, this improvement was occurring not only during the first year of the patient's care but between the first and second anniversary also.

TABLE 10-7  
TWO-YEAR RETENTION RATIOS FOR PATIENTS ON BOOKS  
AT THE END OF CALENDAR YEAR OF ADMISSION, BY SEX,  
ALL CARD-REPORTING PSYCHIATRIC INSTITUTIONS, CANADA, 1955-1959

Sex	Patients Remaining on Books at End of	Year during which Patients Admitted									
		Number					Percentage				
		1955	1956	1957	1958	1959	1955	1956	1957	1958	1959
Male	Calendar year of admission.....	5,810	6,046	5,980	6,685	6,909	100.0	100.0	100.0	100.0	100.0
	One calendar year after year of admission .....	2,884	2,769	2,603	2,883	3,049	49.6	45.8	43.5	43.1	44.1
	Two calendar years after year of admission .....	2,249	2,050	1,974	2,070	2,228	38.7	33.9	33.0	31.0	32.2
	Calendar year of admission.....	5,802	6,248	6,179	6,886	6,992	100.0	100.0	100.0	100.0	100.0
	One calendar year after year of admission .....	2,532	2,598	2,511	2,730	2,824	43.6	41.6	40.6	39.6	40.4
	Two calendar years after year of admission .....	1,870	1,783	1,821	1,893	1,917	32.2	28.4	29.5	27.5	27.4
Female											

Source: Appendix Table 10-3A.

FIGURE 10-8

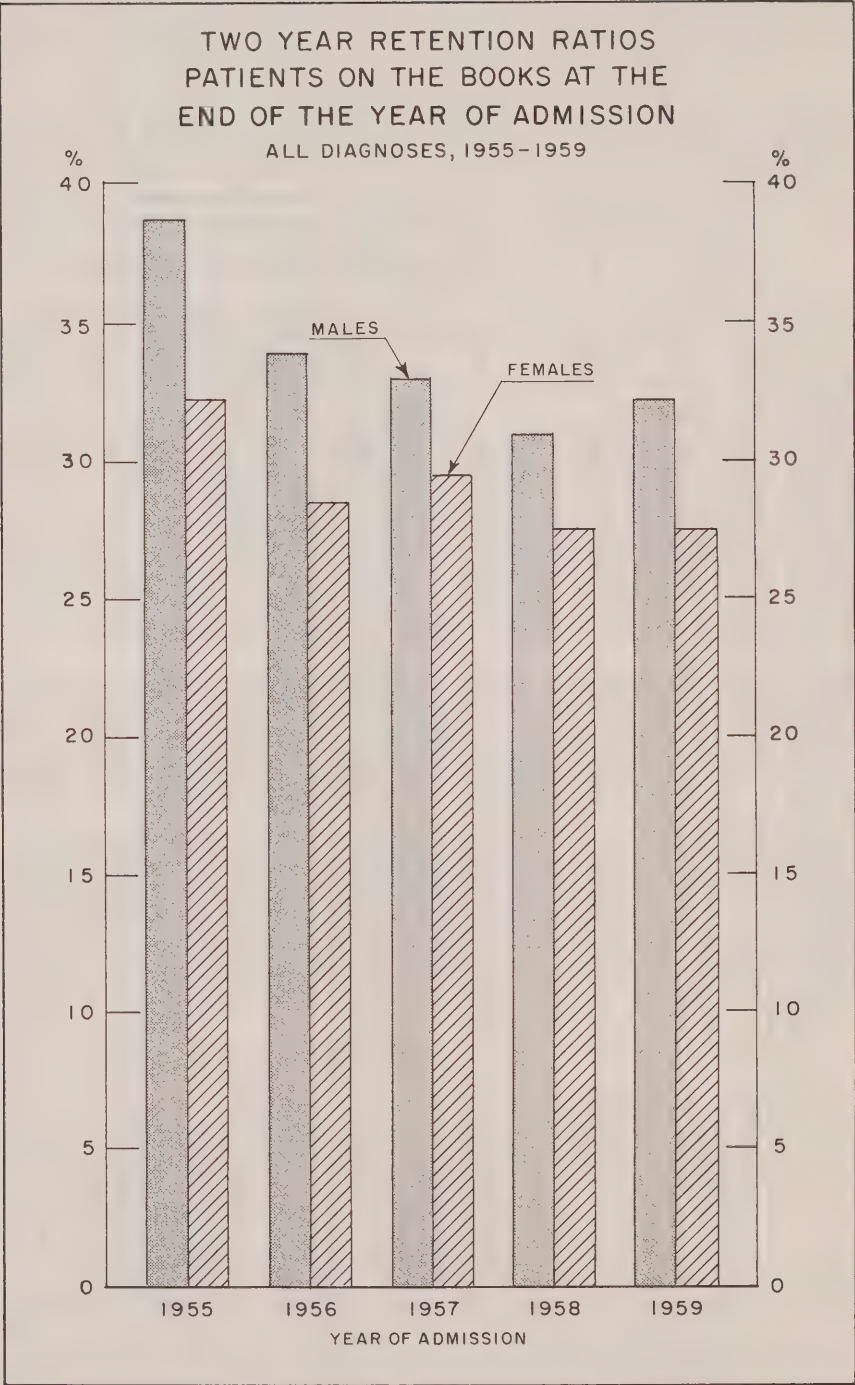
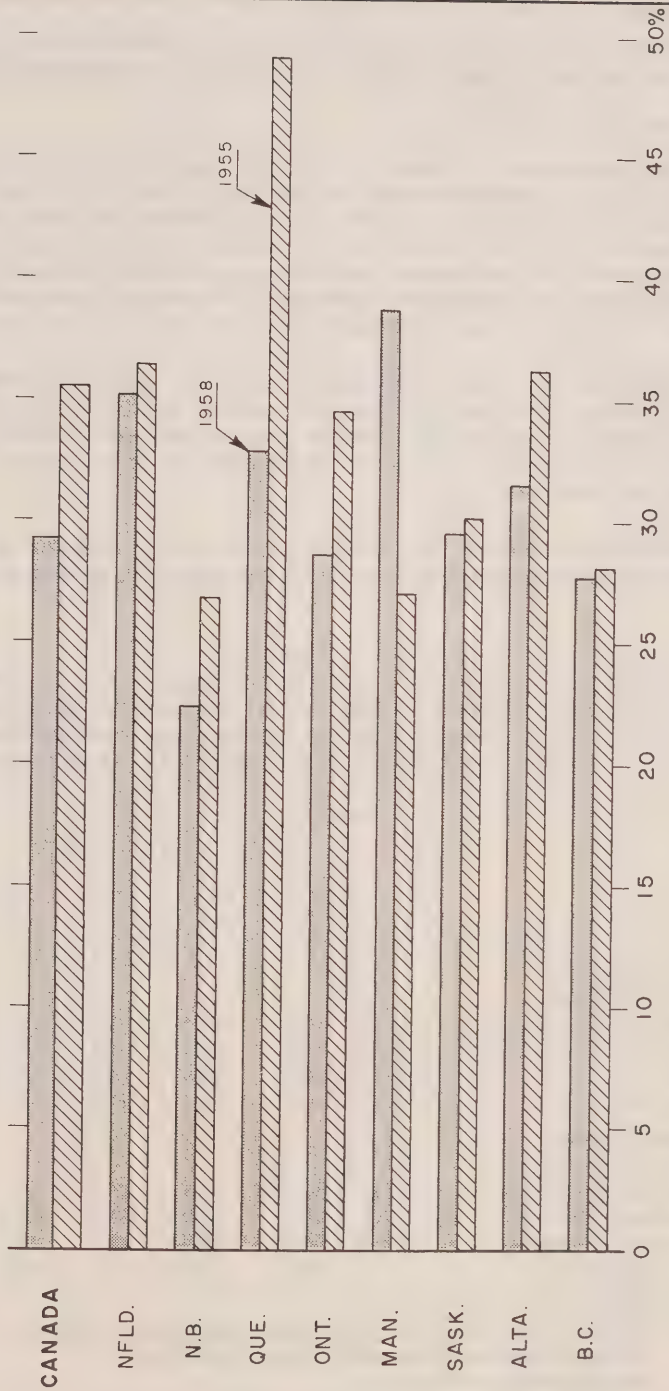




FIGURE 10-9

TWO YEAR RETENTION RATIOS FOR PATIENTS ON THE BOOKS  
AT THE END OF THE YEAR OF ADMISSION, 1955 AND 1958  
ALL INSTITUTIONS, BY PROVINCE



*Provincial Variation, 1955 and 1958*

Fewer patients were retained from the 1958 admissions than from those admitted in 1955 in eight of the ten provinces (see Appendix 10-5).

*Retention by Age Group*

The estimates of retention ratios by age group are subject to minor variation due to categorization by age rather than birth year. Those patients aged 20-39, on books two to three years at the end of 1957, were not entirely derived from the patients aged 20-39 who were on the books less than one year at the end of 1955. For patients under the age of twenty the method of estimation is not affected by these discrepancies. If the age groups are made relatively broad, the effect of this discrepancy will be reduced (see Appendix 10-6).

Retention was highest in patients under the age of 20. Males admitted during 1955 had a retention ratio of 68.9 per cent, while the ratios for males admitted in other years and for females ranged relatively little between 57.1 per cent to 60.9 per cent. The majority of this age group would be diagnosed as mentally retarded.

Over-all retention was similar among those aged 20-39 and those aged 40-59, being lower than for those under the age of 20, or over the age of 60.

TABLE 10-8

TWO-YEAR RETENTION RATIOS BY SEX, AGE, AND DIAGNOSTIC GROUPS,  
FOR PATIENTS ON BOOKS AT THE END OF THE CALENDAR YEAR OF ADMISSION,  
ALL CARD-REPORTING PSYCHIATRIC INSTITUTIONS,  
AND BY AGE GROUP FOR PUBLIC MENTAL HOSPITALS,  
CANADA, 1955 AND 1958

	All Institutions				Public Mental Hospital	
	Male		Female		1955 %	1958 %
	1955 %	1958 %	1955 %	1958 %		
	38.7	31.0	32.2	27.5	34.3	26.4
<i>Age group (years)</i>						
Under 20 .....	68.9	59.4	59.7	58.2	48.9	30.1
20-39 .....	30.6	23.6	24.0	18.2	} 30.8	} 22.7
40-59 .....	32.5	23.6	25.1	20.4		
60+ .....	36.0	34.1	39.6	35.2	39.6	36.5
<i>Diagnostic groups</i>						
Schizophrenia and paranoid psychoses .....	35.0	24.8	27.3	21.2		
Affective psychoses .....	19.9	16.0	13.8	13.4		
Psychoses of senium ..	35.0	34.6	45.0	39.8		
Mental retardation .....	82.9	71.7	77.8	72.9		

Source: Appendix Tables 10-6 and 10-7;  
Department of National Health and Welfare, Mental Health Division,  
*Selected Mental Health Statistics, Canada 1955-1960*;  
Dominion Bureau of Statistics,  
*Mental Health Statistics, Supplement: Patients in Institutions, 1960.*

FIGURE 10-10

TWO YEAR RETENTION RATIOS FOR PATIENTS ON THE BOOKS  
AT THE END OF THE YEAR OF ADMISSION, 1955 - 59  
BY SEX AND AGE GROUP ALL INSTITUTIONS

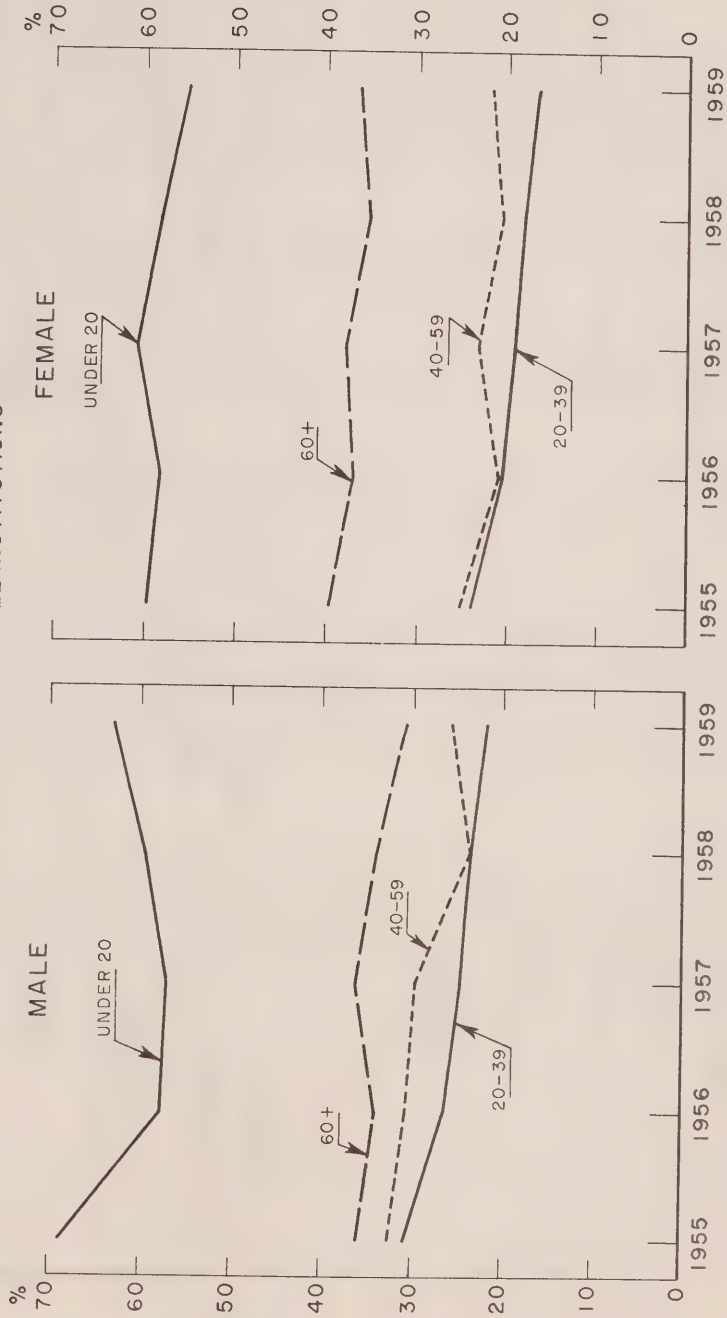
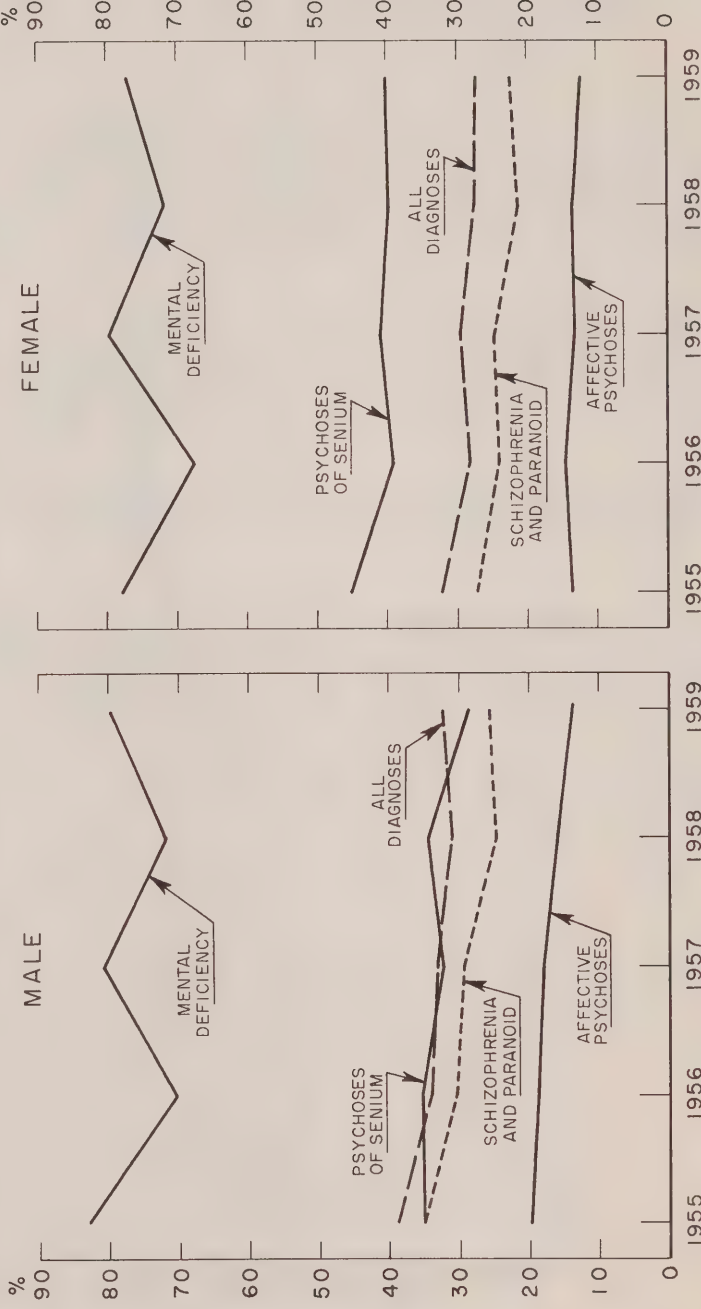


FIGURE 10-II

TWO YEAR RETENTION RATIOS FOR PATIENTS ON THE BOOKS  
AT THE END OF THE YEAR OF ADMISSION,  
BY SEX AND DIAGNOSTIC GROUP ALL INSTITUTIONS, 1955-1959





For patients in public mental hospitals a more marked reduction in retention occurred for those under 20 years between 1955 and 1958, than was evident in the ratio for all institutions.

*Retention by Diagnostic Group*

Retention ratios by diagnostic group are detailed in Appendix 10-7, and summarized in Table 10-8. The retention ratios were highest for mental retardation, varying between 70 per cent and 83 per cent for males, and 68 per cent to 80 per cent for females. There did not seem to be any consistent trends during 1955-1959.

Retention of psychoses of the senium varied between 29 per cent to 35 per cent for males, and 39 per cent to 45 per cent for females. Retention of females was higher, reflecting the higher death rates among males.

Schizophrenic and paranoid psychoses decreased in retention between 1955 and 1959 for both males (35 per cent to 26 per cent) and females (27 per cent to 22 per cent).

Affective psychoses had the lowest retention ratios (of the groups studied), 14 per cent to 20 per cent for males and 12 per cent to 15 per cent for females. The ratios for females changed very little during this period.

*Absolute Number of Patients Retained Two to Three Years*

The preceding section has described the reduction in the *percentage* of patients retained two to three years. Although the number of admission-events (both first and readmissions) has steadily increased, the absolute number of patients remaining on the books continuously for two to three years was not higher for patients admitted in 1958 than for those admitted in 1953 or 1955. For public mental hospitals the number was 8 per cent *lower* for admissions during 1958 than for admissions during 1953.

TABLE 10-9  
NUMBER OF PATIENTS RETAINED ON BOOKS AT THE END  
OF TWO CALENDAR YEARS AFTER THE YEAR OF ADMISSION,  
CANADA, ALL CARD-REPORTING PSYCHIATRIC INSTITUTIONS,  
AND PUBLIC MENTAL HOSPITALS, 1953, 1955, 1958

Sex	Year of Admission		
	1953	1955	1958
Males .....	2,186	2,249	2,070
Females .....	1,864	1,870	1,893
Total — All institutions .....	4,050	4,119	3,963
Public mental hospitals .....	3,119	3,140	2,859

Source: See Appendix 10-3A.

## Actuarial Estimates of Retention by Province, 1956-1960

### *Method of Calculation*

In the preceding part of this chapter various estimates were made of the retention of patients on the books for different lengths of time. These two-, five- and ten-year retention ratios refer to patients on the books and not to groups of admissions.

Probabilities and rates of discharge and death, and longitudinal retention may be calculated for groups of admissions by means of life-table methods. It is only within recent years that these methods have been widely used, but their application to data from psychiatric institutions had been described over 120 years previously by William Farr.<sup>15</sup>

In Canada, such calculations have been described by Fisher and Clarke, Fisher and Schultz, Wanklin, *et al.*, and Sellers. Dominion Bureau of Statistics<sup>16</sup> has published a report on the rates and probabilities of separation from mental institutions for patients diagnosed as schizophrenia, mental deficiency and psychoses of the senium respectively for the years 1956, 1957 and 1958.<sup>17</sup>

It is possible to apply actuarial analysis to data from the institutions of individual provinces. Estimated discharge rates were calculated for each province and for various duration intervals for the period 1956-1960. Absolute discharge rates were used in order to obviate provincial differences in death rates due to variations in the admission of aged patients. The method described by Fisher and Clarke was employed.<sup>18</sup> The absolute rates represent the rate of discharge if there had been no deaths. These retention rates would decrease if the discharge rates increased, and would not be affected by changed death rates. The actual proportion of patients remaining in hospital is somewhat less than that estimated by retention rates, since the number of residents is also depleted by death within the institutions.

The converse of discharge is retention. The retention rate is unity minus the discharge rate and is defined as the estimated proportion of patients remaining under hospital care at the end of a specified duration interval, if there had been no deaths during that interval.

Some discrepancies in card reporting were evident during this five-year period from institutions in Prince Edward Island, Nova Scotia, and Alberta, where there had been variation in the number of card-reporting institutions (see Appendix 8-1). Because of these discrepancies, retention rates are not listed for these three provinces. National rates are derived from data including these three provinces.

### *Stay-specific Retention Rates*

The estimated retention rates for various duration intervals are shown in Table 10-10. Nationally, 62 per cent of admissions remained under hospital

<sup>15</sup> Farr, W., *op. cit.*

<sup>16</sup> Dominion Bureau of Statistics, *Rates and Probabilities of Separation from Mental Institutions, 1956-1958, op. cit.*

<sup>17</sup> See p. 78.

<sup>18</sup> Fisher, J. W. & Clarke, E. E., *The Derivation of Rates of Separation from Mental Hospitals*, Report Series, Memo No. 1, Mental Health Division, Department of National Health and Welfare, Ottawa: Queen's Printer, 1955.

TABLE 10-10  
ESTIMATED PERCENTAGE RETENTION FOR SPECIFIC DURATION INTERVALS, ALL CARD-REPORTING  
PSYCHIATRIC INSTITUTIONS, CANADA AND SELECTED PROVINCES, 1956-1960<sup>1</sup>

Duration Interval	Canada	New- found- land	New Brunswick	Quebec	Ontario	Manitoba	Saskat- chewan	British Columbia
0-1 month.....	61.9	79.7	62.7	62.1	63.1	53.8	61.6	56.3
1-4 months.....	48.5	48.2	45.5	55.4	50.2	53.1	42.3	36.4
4-12 months.....	62.3	39.2	73.9	68.5	65.0	58.2	64.0	61.3
1-2 years.....	79.4	72.1	64.3	82.4	81.0	79.8	84.3	79.5
2-3 years.....	89.6	81.6	88.6	89.9	90.9	91.9	89.4	88.8
3-5 years.....	87.9	75.3	90.6	87.9	89.7	89.8	89.9	88.0
5-10 years.....	82.5	62.3	85.4	83.7	87.1	86.2	83.7	78.1

<sup>1</sup>Retention rates were derived from absolute rates of discharge. Provinces differ in retention rates for the early intervals because of differences in accommodation, patient characteristics, diagnostic composition, as well as differences in hospital treatment programmes, discharge policies and community resources.

care at the end of one month, and 82 per cent of patients who had been hospitalized for 5 years remained under hospital care a further 5 years.

The estimated retention rates show considerable interprovincial variation for the early duration intervals 0-1 month (ranging from 53.8% to 79.1%), 1-4 months (ranging from 36.4% to 55.4%) and 4-12 months (ranging from 39.2% to 73.9%). These interprovincial variations reflect differences in accommodation, admission and discharge policies, patient characteristics and community alternatives to hospital care. For the duration interval 1-2 years there is less variation; the retention rates for five out of the seven provinces tabulated (Quebec, Ontario, Manitoba, Saskatchewan and British Columbia) were within a 5 per cent range.

#### *Ten-year Retention for Patients Remaining Various Intervals*

The retention rates for individual duration intervals may be combined to project the proportion of admissions remaining at subsequent intervals. Nationally, 61.9 per cent of admissions were retained to one month, and 48.5 per cent of patients who had been hospitalized one month remained to the end of four months. The estimated proportion of admissions retained four months is calculated as 61.9 per cent x 48.5 per cent = 30.0 per cent.

As described in Chapters 3, 6 and 7, there is considerable interprovincial variation in the types of accommodation, diagnostic characteristics of admissions, and proportion of readmissions among all admissions. To reduce the effect of these differences the cumulative proportion of patients remaining under continuous hospital care was calculated for a group of patients who had been hospitalized for various lengths of time. Populations hospitalized more than four months would contain relatively few patients in psychiatric units or psychiatric hospitals, or patients with alcoholism or psychoneuroses, and would consist largely of patients under the care of mental hospitals and hospitals for mentally retarded.

On the basis of national data for the five-year period 1956-1960, it is estimated that 32.2 per cent of patients hospitalized for four months would remain continuously hospitalized for ten years, if there were no deaths. Provincially this ranged from 13.6 per cent to 37.4 per cent, with five provinces having ratios between 32.6 per cent and 37.4 per cent. For patients hospitalized two years, the national estimate is that 65.0 per cent would remain 10 years, if there were no deaths.

The provincial variations evident in the retention of admissions were less marked in the subsequent retention of patients who had remained hospitalized for four or more months. For patients who had spent four months in hospital, further retention until two years ranged between 46.5 per cent and 56.5 per cent for six provinces. Ten years retention for patients who had spent two years in hospital showed even less variation, ranging from 66.2 per cent to 71.2 per cent in five provinces.



TABLE 10-11  
ESTIMATED PERCENTAGE OF ADMISSIONS RETAINED FOR VARIOUS INTERVALS,  
ALL CARD-REPORTING PSYCHIATRIC INSTITUTIONS,  
CANADA AND SELECTED PROVINCES, 1956-1960

On Books End of:	Canada	Newfound- land	New Brunswick	Quebec	Ontario	Manitoba	Saskatch- ewan	British Columbia
0 month .....	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
1 month .....	61.9	79.7	62.7	62.1	63.1	53.8	61.6	56.3
4 months .....	30.0	38.4	28.6	34.4	31.7	28.6	26.1	20.5
12 months .....	18.7	18.9	21.1	23.6	20.6	16.6	16.7	12.6
2 years .....	14.9	13.6	13.6	19.4	16.7	13.3	14.1	10.0
3 years .....	13.3	11.1	12.0	17.5	15.2	12.2	12.6	8.9
5 years .....	11.7	8.4	10.9	15.4	13.6	11.0	11.3	7.8
10 years .....	9.7	5.2	9.3	12.9	11.8	9.4	9.5	6.1

Source: Table 10-10.

**TABLE 10-12**  
**ESTIMATED TEN-YEAR RETENTION FOR PATIENTS ON BOOKS AT SPECIFIC**  
**INTERVALS, ALL CARD-REPORTING PSYCHIATRIC INSTITUTIONS,**  
**CANADA AND SELECTED PROVINCES, 1956-1960**

Patients on Books at End of:	Canada	Nfld.	N.B.	Quebec	Ontario	Man.	Sask.	B.C.
	%	%	%	%	%	%	%	%
Patients on books at end of <i>one month</i> :								
1 month .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
4 months .....	48.5	48.2	45.5	55.4	50.2	53.1	42.3	36.4
12 months .....	30.3	23.7	33.6	38.0	32.7	30.9	27.1	22.3
2 years .....	24.0	17.1	21.6	31.3	26.4	24.7	22.8	17.7
3 years .....	21.5	13.9	19.2	28.2	24.0	22.7	20.4	15.8
5 years .....	18.9	10.5	17.4	24.8	21.6	20.4	18.3	13.9
10 years .....	15.6	6.5	14.8	20.7	18.8	17.5	15.4	10.8
Patients on books at end of <i>four months</i> :								
4 months .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
12 months .....	62.3	39.2	73.9	68.5	65.0	58.2	64.0	61.3
2 years .....	49.5	35.5	47.5	56.5	52.7	46.5	54.0	48.7
3 years .....	44.4	28.9	42.1	50.8	47.9	42.7	48.3	43.3
5 years .....	39.0	21.8	38.1	44.6	42.9	38.4	43.4	38.1
10 years .....	32.2	13.6	32.6	37.4	37.4	33.1	36.3	29.8
Patients on books at end of <i>one year</i> :								
12 months .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2 years .....	79.4	72.1	64.3	82.4	81.0	79.8	84.3	79.5
3 years .....	71.1	58.8	57.0	74.1	73.6	73.4	75.4	70.1
5 years .....	62.5	44.3	51.6	65.2	66.0	65.9	67.8	62.1
10 years .....	51.6	27.6	44.1	54.6	57.5	56.8	56.7	48.5
Patients on books at end of <i>two years</i> :								
2 years .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
3 years .....	89.6	81.6	88.6	89.9	90.9	91.9	89.4	88.8
5 years .....	78.8	61.5	80.3	79.1	81.5	82.6	80.4	78.2
10 years .....	65.0	38.3	68.6	66.2	71.0	71.2	67.3	61.1
Patients on books at end of <i>three years</i> :								
3 years .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
5 years .....	87.9	75.3	90.6	87.9	89.7	89.8	89.1	88.0
10 years .....	72.5	46.9	77.4	73.6	78.1	77.4	75.2	68.8

Source: Derived from Table 10-10.

FIGURE 10-12

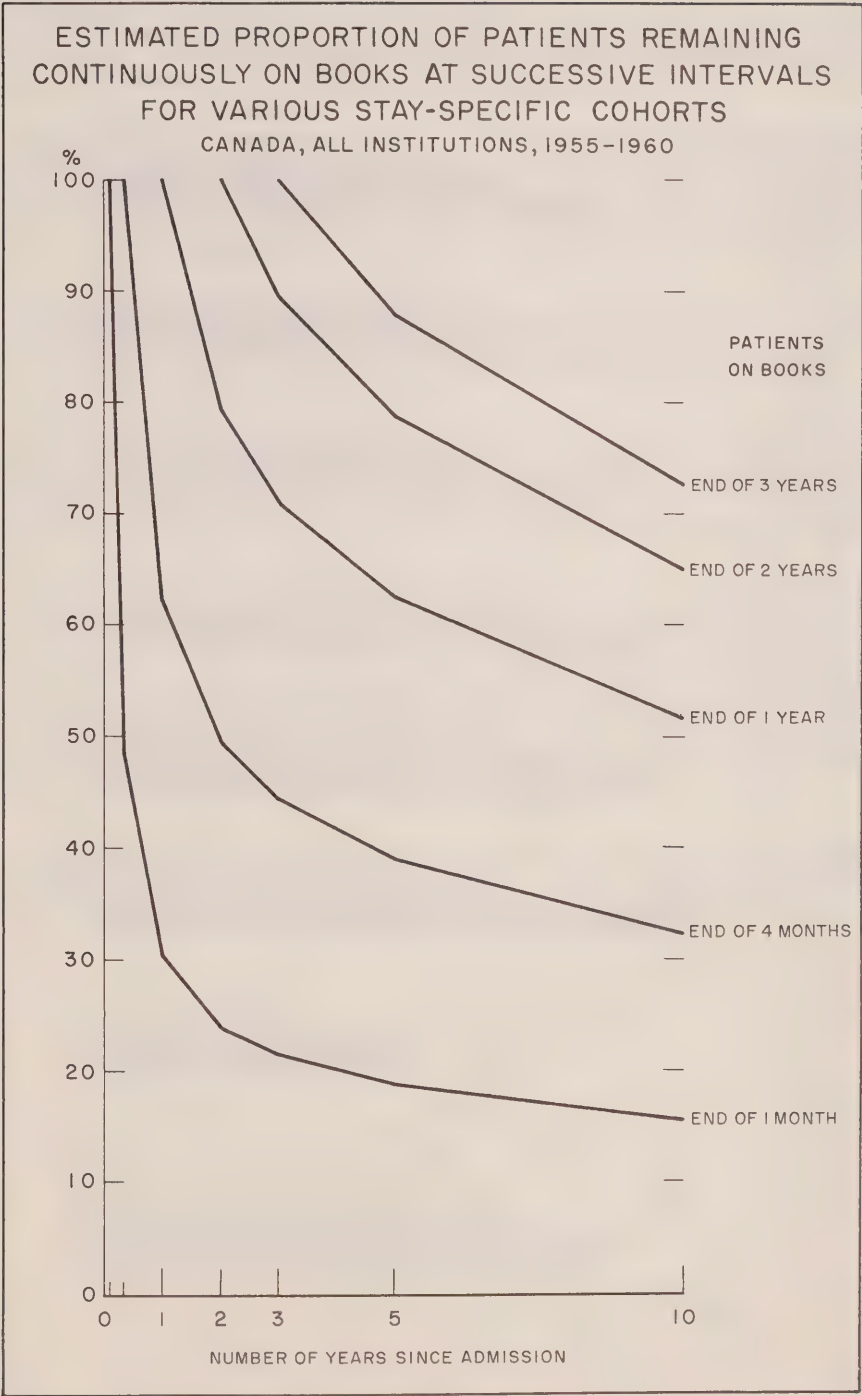
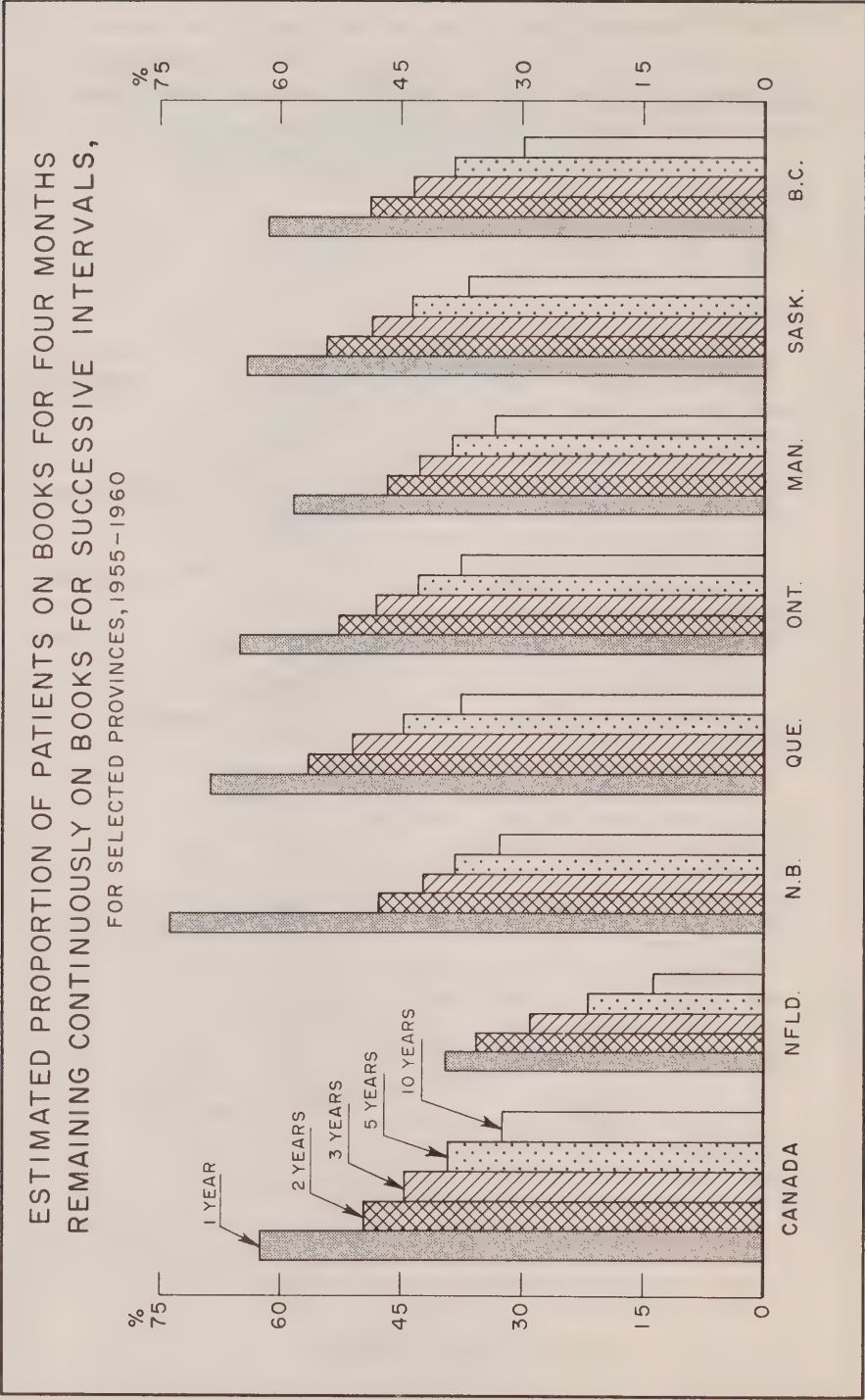


FIGURE 10-13





## Conclusions

(i) Two-thirds of patients in psychiatric institutions at the end of 1950 remained under continuous hospital care to the end of 1955, and in seven provinces 53-54 per cent remained until the end of 1960.

(ii) Of the 67,525 patients on books of institutions at the end of 1955, five-eighths remained under continuous care, at least one-eighth died, and less than one-fourth had left by the end of 1960. Retention ratios were lowest (44 per cent) for those hospitalized under five years, and higher for those with five to ten years of hospitalization (73 per cent) or over ten years of care (78 per cent).

(iii) For the 42,660 patients under continuous hospital care between 1955 and 1960 at least 600,000 years had been spent in hospital, and an estimated \$283 million expended on hospital care for the five-year period 1955-1960.

(iv) Definite changes occurred in the retention of patients admitted between 1953 and 1959. A lower proportion of patients was retained from the patients remaining on books after admission in 1959 than from those admitted in 1955. The absolute number of mental hospital patients retained two to three years was 8 per cent lower for admissions during 1958 than for admissions during 1953.

(v) It is estimated that one-third of admissions during 1956-1960 remained hospitalized for more than four months, and that one-third of patients remaining four months would remain continuously hospitalized for ten years. In five of the provinces the proportion of patients hospitalized four months remaining until ten years ranged from 33-37 per cent. For patients hospitalized two years the national proportion remaining ten years was 65 per cent, ranging from 66-71 per cent in five provinces. Interprovincial variation was more marked in the early months, and decreased with increasing stay.

(vi) Statistical analyses of retention of patients under hospital care should be performed by Dominion Bureau of Statistics. These analyses should include additional demographic and hospital data available on the admission cards.



## PERSONNEL, FINANCES, AND OUT-PATIENT CLINICS

### Personnel

#### *Interpretation of Personnel Ratios*

Since 1931, DBS has published tabulations of the number and type of personnel in psychiatric institutions. Although personnel have increased in number, it is difficult to equate this with parallel changes in the amount or "quality" of patient care. The confusion is extended by including part-time personnel with full-time personnel, by large differences in the professional qualifications and functions of these personnel, and by not categorizing personnel in various types of psychiatric institution separately.

The ratio of patients to personnel is an indirect indication of the maximum amount of time available (but not necessarily utilized) for patient care. Because of variation in the work week, vacations, etc., a more direct indication would be in terms of *personnel hours per patient day*. Such ratios of personnel hours per patient day have been used in DBS publications for general hospitals.

During 1960, public psychiatric institutions (excluding psychiatric units) reported<sup>1</sup> spending \$75.3 million in salaries and wages, having 27,182 full-time personnel, and spending \$3.18 on salaries and wages per patient-day. On the basis of a 2,000-hour work-year for personnel, it is estimated that the mean hourly rate for personnel was \$1.40, and that patients had a total of 2.3 hours of personnel time per patient-day.<sup>2</sup> This is less than one-fifth the 1958 ratio of 11.85 hours per patient-day for general hospitals.

Historical comparisons of ratios of personnel to patients are unreliable because of the shortening in length of the work week, increased vacation, holiday, and sick leave benefits which have occurred over the past 30 years.

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<sup>1</sup>Dominion Bureau of Statistics, *Mental Health Statistics, Financial Supplement 1960*, Ottawa: Queen's Printer, 1962.

<sup>2</sup>There were 1,147 full-time registered nurses reported, which represents a ratio of one registered nurse to 59 patients, or 5.6 minutes per patient-day. The ratio of eight full-time physicians per 1,000 patients represents a maximum of 19 minutes of physician care per patient per week. In non-federal general hospital psychiatric units with residency training programmes, an estimated 3.1 hours per in-patient per week were spent by physicians. Department of National Health and Welfare, Research and Statistics Division, *Survey of Psychiatric Units in General Hospitals, 1957*, Preliminary Report, dupl., April 1960.

**TABLE 11-1**  
**PERSONNEL HOURS PER PATIENT-DAY, PUBLIC GENERAL HOSPITALS,**  
**CANADA, 1958.**

	HOURS
All Personnel .....	11.85
Graduate nurses .....	2.61
Student nurses .....	1.35
Graduate nursing assistants.....	0.74
Trainee nursing assistants.....	0.22
Orderlies .....	0.34
Interns .....	0.26
Other personnel .....	6.33

Source: Dominion Bureau of Statistics, *Hospital Statistics*, 1958, Vol. 1, Ottawa: Queen's Printer, 1960, p. 127.

### *Hospital Differences in Personnel Ratios*

"Mental hospitals are often in the position of having to rob Peter to pay Paul, any improvement in the care of one type of patient being made at the expense of the other."<sup>3</sup>

Within similar institutions with similar numbers of personnel, the amount of care provided for various types of patients (recent admissions, continuing patients, geriatric, infirmary, etc.) may vary widely. From the DBS data, it is not possible to relate over-all changes in personnel ratios to changes in the amount, type and quality of patient-care for various types of patients. DBS does not separately tabulate the number and type of personnel for public mental hospitals, hospitals for mentally retarded, hospitals for the aged and senile. Within different types of institution the over-all ratios of personnel vary widely. In 1960 the salary and wage cost per patient-day was \$2.97 in mental hospitals and \$11.97 in psychiatric hospitals.<sup>4</sup> There is a wide range in ratios of patients to different types of nurses in various kinds of institutions. In British Columbia these ratios varied from 14.2 patients per Registered Nurse in a psychiatric hospital to 150.2 patients per Registered Nurse in a hospital for mentally retarded.

Although the purpose and functions of psychiatric hospitals are quite different from those of mental hospitals, the personnel of this type of hospital are not separated from other personnel in DBS publications.

### *Historical Changes in Personnel Ratios*

"There is strong evidence that the number of therapeutic staff members on the wards—in even the better mental hospitals—has decreased since the 1850's."<sup>5</sup>

<sup>3</sup>Jones, Kathleen and Sidebotham, R., *Mental Hospitals at Work*, op. cit., p. 136.

<sup>4</sup>Dominion Bureau of Statistics, *Mental Health Statistics, Financial Supplement*, 1960, op. cit.

<sup>5</sup>Group for the Advancement of Psychiatry, Committee on Hospitals, *Administration of the Public Psychiatric Hospital*, Report No. 46, New York: The Association, p. 148.



TABLE 11-2  
NURSING STAFF RATIOS,  
BRITISH COLUMBIA PROVINCIAL MENTAL HEALTH SERVICE,  
MARCH 31, 1962

	Crease Clinic (psychiatric hospital)	Provincial Mental Hospital (mental hosp.)	Valleyview Hospital (hosp. for aged and senile)	Woodlands School (hosp. for mentally retarded)
Average number of hospitalized patients 1961-62 .....	242	2,825	736	1,352
<i>Nursing Staff at March 31, 1962</i>				
<i>Registered Nurses</i>				
Number .....	17	45	10	9
Patients per nurse .....	14.2	62.8	73.6	150.2
<i>Psychiatric Nurses</i>				
Number .....	96	370	144	257
Patients per nurse .....	2.5	7.6	5.1	5.3
<i>Aides</i>				
Number .....	70	321	144	349
Patients per aide .....	3.5	8.8	5.1	3.9

Source: British Columbia Dept. of Health Services & Hospital Insurance; Mental Health Services Branch, *Annual Report for twelve months ended March 31, 1962*, Victoria: Queen's Printer, 1963, p. 33.

TABLE 11-3  
DISTRIBUTION OF PERSONNEL,  
PROVINCIALY OPERATED PSYCHIATRIC INSTITUTIONS, ONTARIO, 1960

	All Facilities	Psychiatric Hospital
Average number of hospitalized patients, ..	21,593 = 100%	71 = 0.3%
Physicians, certified specialists .....	91 = 100%	8 = 8.8%
Psychologists .....	91 = 100%	17 = 18.7%
Psychiatric social workers .....	85 = 100%	17 = 20.0%
Registered occupational therapists .....	38 = 100%	7 = 18.5%

Source: Ontario Department of Health, Mental Health Branch, *Ninety-fourth Annual Report of the Mental Health Branch of the Department of Health of the Province of Ontario*, calendar year 1960, Toronto: Queen's Printer, 1961.

Nationally, there were 145 patients per physician in provincially operated institutions in 1932. In 1960, reporting Canadian psychiatric institutions (including private and federal hospitals, but excluding psychiatric units of general hospitals) had 125 patients per full-time physician, and an estimated 345 patients per full-time qualified psychiatrist.<sup>6</sup>

The minimum ratio of "well qualified physicians", recommended for Canadian mental hospitals twenty years ago, was based on the number of resident patients, *and* the number of admissions.

"There must be adequate medical staff of well-qualified physicians, the proportion to total patients to be not less than 1 to 150 in addition to the superintendent, and to the number of patients admitted annually not less than 1 to 40."<sup>7</sup>

Although the ratio of admissions per mental hospital bed has doubled between 1932 and 1960, the ratio of physicians to patients has not. It is not possible to estimate from the published personnel ratios to determine whether patients in mental hospitals received "more" or "better" medical care in 1960 than 1932. The recommended standards of 150 patients per physician in "continued treatment services", and 30 patients per physician in "admission and intensive treatment services" described in 1958 by the American Psychiatric Association, were considered obsolete two years later.<sup>8</sup>

"Existing Standards...are based on a philosophy of treatment which no longer prevails. This refers to the philosophy of a decade ago, of intensive treatment for the newly ill and humane care for patients with long standing illness, as opposed to the current philosophy of total treatment for all. During the 40's and 50's the Standards rightly spelled out the operational requirements: today, we need to measure the effectiveness of service. The two propositions are different in essence."<sup>9</sup>

Even more marked difficulties arise in the derivation of suitable standards and patterns for staffing psychiatric divisions of general hospitals.

"Considerable additional experience and evaluation is required to determine more appropriate and effective patterns of staffing in terms of number, type, training and function of various categories of personnel. In view of the marked changes proposed in the nature of general hospital psychiatric care there is considerable need for clarification and evolution of various patterns of professional and administrative responsibilities both within the psychiatric department, and to the over-all hospital structure. The function, role, responsibilities, and inter-relationships of such professions as psychology and social work (which to some extent have been established—or calcified—in traditional 24-hour hospitals or 8-hour, 5-day-a-week clinics) can not be automatically transposed to the proposed community mental health centre."<sup>10</sup>

<sup>6</sup>Dominion Bureau of Statistics, *Mental Health Statistics*, 1960, *op. cit.*, pp. 143-144. Over one-half of the physicians were not qualified psychiatrists.

<sup>7</sup>Canada, House of Commons, Special Committee on Social Security, *Minutes of Proceedings and Evidence*, No. 11, *op. cit.*, Appendix "A". Brief presented by various Directors of Provincial Mental Health Services, and Professors of Psychiatry.

<sup>8</sup>American Psychiatric Association, Committee on Standards and Policies of Hospitals and Clinics, *Standards for Hospitals and Clinics*, 1956 edition, revised June 1958, Washington: The Association, 1958.

<sup>9</sup>*Mental Hospitals*, May 1960, pp. 37-38.

<sup>10</sup>Richman, A., *Psychiatric services (Administrative Review)*, *Hospitals* 33:141-142 *et passim*, 1964.

*Professional Qualifications of Personnel*

"In a hospital organization the level of treatment will seldom rise above the standard set by the physician. If physicians are inadequate in number or calibre, the patients suffer."<sup>11</sup>

In 1960 there were 1,015 physicians reported from all Canadian psychiatric institutions (excluding psychiatric units). Nearly one-half (N=496) of the physicians were "part-time", and included 71 qualified psychiatrists and 275 consultants in non-psychiatric specialties. Of the 519 full-time physicians, 32 were Clinical Directors and 188 were Specialists in Psychiatry. Thus, less than one-fifth of the total medical personnel were full-time Specialists in Psychiatry.

TABLE 11-4

QUALIFICATIONS OF SELECTED PROFESSIONAL AND TECHNICAL PERSONNEL,  
ALL PSYCHIATRIC INSTITUTIONS<sup>1</sup>, CANADA, 1960

	Full Time	Part Time
<i>Psychologists</i>		
with PhD degree .....	18	63
with Master's degree .....	69	8
Other.....	38	4
<i>Pharmacists</i>		
Registered .....	15	8
Other.....	16	3
<i>Laboratory technicians</i>		
Certificated .....	72	2
Other.....	52	9
<i>Radiology technicians</i>		
Registered .....	43	5
Other.....	21	7
<i>Occupational therapists</i>		
Registered .....	105	4
Other.....	220	2
<i>Physiotherapists</i>		
Registered .....	13	3
Other.....	7	—
<i>Social Workers</i>		
Master's degree .....	86	2
Bachelor's degree.....	54	—
Other.....	55	9
<i>Dietitians</i>		
Certificated .....	35	4
Other qualified .....	6	—
Other.....	26	1

<sup>1</sup> Excludes psychiatric units. Average number of patients hospitalized in institutions, exclusive of psychiatric units, was 67,663, Dominion Bureau of Statistics, *Mental Health Statistics, 1960*, *op. cit.*, p. 36.

Source: Dominion Bureau of Statistics, *Mental Health Statistics, 1960*, *op. cit.*, p. 146.

<sup>11</sup> Canadian National Committee for Mental Hygiene in collaboration with the Mental Hospital Survey Committee, *A Survey of the Ontario Hospitals*, dupl., Feb. 1937, p. 16.

Similar differences in qualifications occur among other professional groups; of 16,835 "nursing personnel" 1,147 were Registered Nurses, 2,464 were Psychiatric Nurses.<sup>12</sup> Among 125 full-time psychologists, 18 had a Doctor's degree; and among 195 social workers, 86 had a Master's degree.<sup>13</sup>

*The Need for Psychiatrists*

"At the present time many physicians feel swamped by routine; routine rounds with a casual greeting of too many patients; routine physical examinations of those who have just become ill or are thought to be ill; routine reports on a hodge-podge of questions; and routine letters to enquiring relatives. A situation has been created where too few patients can have the individual attention to their problems that is dictated by the canons of good treatment. Mass therapy, therapy by subordinate technicians, and the therapy of a general program are all valuable but they cannot take the place of the individual discussion of moods, experiences, fears and hopes between the patient and his physician."<sup>14</sup>

There were an estimated 600 psychiatrists in Canada in 1960.<sup>15</sup> One-half of these psychiatrists (N=291) were on the full-time or consulting staff of psychiatric institutions (exclusive of psychiatric units).<sup>16</sup> The proportion of graduates from Canadian medical schools among these 600 psychiatrists may be conservatively estimated as less than 80 per cent; i.e., less than 480 of these Canadian psychiatrists had graduated from Canadian medical schools.

TABLE 11-5  
NUMBER OF PRACTISING PSYCHIATRISTS IN UNITED STATES 1961,  
GRADUATED FROM CANADIAN MEDICAL SCHOOLS,  
BY MEDICAL SCHOOL, DATE OF GRADUATION

Year of Graduation		Place of Graduation	
1955-61 .....	36	University of Alberta .....	18
1950-54 .....	61	University of Manitoba .....	22
1945-49 .....	67	University of Sask. ....	1
1940-44 .....	43	University of Toronto .....	113
1935-39 .....	42	Queen's University .....	35
1930-34 .....	31	Univ. of Western Ontario .....	23
1925-29 .....	62	Kingston Medical College for Women	1
1920-24 .....	25	University of Ottawa .....	6
Before 1920 .....	7	University of Montreal .....	28
Total .....	374	McGill University .....	98
		Laval University .....	10
		Dalhousie University .....	19
		Total .....	374

Source: Survey of American Psychiatric Association Membership, 1961.  
Conference on Graduate Psychiatric Education, Washington, D.C.,  
December 26, 1962, Psychiatric Manpower Bulletin No. 3, July 1963.

<sup>12</sup>Dominion Bureau of Statistics, *Mental Health Statistics*, 1960, *op. cit.*, p. 145.

<sup>13</sup>*Ibid.*, p. 146.

<sup>14</sup>Canadian National Committee for Mental Hygiene, *op. cit.*

<sup>15</sup>Canadian Psychiatric Association, brief submitted to the Royal Commission on Health Services, Toronto, May 1962, Appendix 13.

<sup>16</sup>Dominion Bureau of Statistics, *Mental Health Statistics*, 1960, *op. cit.*, p. 144.



In 1961, there were 374 graduates of Canadian medical schools, who were members of the American Psychiatric Association and practising in the United States.<sup>17,18</sup> There were more graduates of Canadian medical schools practising psychiatry in the United States than in all Canadian provincial, federal or private psychiatric institutions.

Ninety-seven psychiatrists, who had graduated from Canadian medical schools since 1950, were practising in the United States in 1961. In 1960 there were 50 Canadian and foreign graduates who became qualified in psychiatry in Canada.<sup>19</sup> If it is assumed that one-fifth of these 50 were graduates from foreign schools, this leaves 40 graduates from Canadian medical schools. The number qualifying during 1960 was higher than the average for the previous 10 years, and it is estimated that less than 300 persons graduating from Canadian medical schools between 1950 and 1961 entered psychiatric practice before 1961. Therefore, it is estimated that at least one-fourth of the graduates from Canadian schools since 1950, who were practising psychiatry in 1961, were practising in the United States.

TABLE 11-6

ESTIMATED AVERAGE OUTPUT OF QUALIFYING PSYCHIATRISTS,  
NEEDED TO ACHIEVE DIFFERENT PSYCHIATRIST / POPULATION RATIOS

Ratio of Psychiatrists to Population in 1970.....	1 per 30,000	1 per 25,000	1 per 20,000	1 per 15,000	1 per 10,000
Number of psychiatrists practising in 1960..	600	600	600	600	600
Number of psychiatrists practising in 1970 at the given ratio .....	733	880	1,100	1,466	2,200
Increase due to ratio higher than 1/30,000 of 1960.....	—	120	300	600	1,200
Increase due to population expansion (4,000,000 over 1960-1970 period).....	133	160	200	266	400
Replacement numbers of psychiatrists inactivated over 1960-1970 (3% per annum)	220	244	280	345	462
Total number psychiatrists to be qualified over the 10-year period (1960-1970) to achieve ratio .....	353	524	780	1,211	2,062
Average output from universities, each year over 10 years, required to achieve ratio...	35	52	78	121	206

Note: The estimate is based on a Canadian population projection from 18,000,000 in 1960 to 22,000,000 in 1970 and a yearly attrition rate of psychiatrists (by death, retirement, emigration, etc.) at 3%.

Source: Canadian Psychiatric Association, *op. cit.*, Appendix 13, p. 3.

The estimated 600 psychiatrists in Canada in 1960 represented a ratio of one psychiatrist per 30,000 population, and "a realistic satisfaction of need would be

<sup>17</sup>American Psychiatric Association, *Ad Hoc Committee on Manpower, Psychiatric Manpower Bulletin*, No. 3, July 1963.

<sup>18</sup>Data from another source, the American Medical Association, indicates that there were 548 graduates of Canadian medical schools (at least 349 of whom were born in Canada) specializing in psychiatry in the United States in April 1962. Judek, S., *Medical Manpower in Canada*, a study prepared for the Royal Commission on Health Services, Ottawa: Queen's Printer, 1964, p. 280.

<sup>19</sup>Canadian Psychiatric Association, *op. cit.*, Appendix 13, p. 2.

attained by the ratio of one psychiatrist per 10,000 of the population".<sup>20</sup> Between 1960 and 1970 an additional 2,062 psychiatrists would be needed to achieve a ratio of one psychiatrist to 10,000 population.

The 1962 Conference on Psychiatric Education,<sup>21</sup> concluded that the supply of psychiatrists would be increased by strengthening university Departments of Psychiatry, so that no medical school would have less than 10 per cent of its graduates entering psychiatry. The Canadian Medical Association<sup>22</sup> has estimated that 9,000 graduates are required from Canadian medical schools between 1960 and 1970. If 10 per cent of these entered psychiatry there would still remain a deficit of over 1,100 psychiatrists. To enable the training of additional psychiatrists, the financing of training programmes would have to be made appropriate for current and future needs.<sup>23</sup> Increased numbers of psychiatrists would have to be recruited by immigration and, in addition, Canadian patterns of practice and income would have to be made more equivalent to those of the United States in order to retain those trained or practising in Canada.

### *The Training of Personnel*

It has been claimed that "The numbers of persons helped to obtain training under the National Health Grants since 1948 is impressive," and a tabulation for the period 1948-1961 includes the following:<sup>24</sup>

TABLE 11-7  
TRAINING UNDER NATIONAL HEALTH GRANTS, 1948-1961

	Bursaries	Short Courses	Total
Psychiatrists .....	505	279	784
Psychologists .....	275	122	397
Psychiatric social workers .....	412	95	507

In a further section of the same report:

"It should be noted here, however, that individual bursaries for training, either for a full academic year or more or for short courses and institutes, were provided to 784 psychiatrists, 552 psychiatric nurses, 40 electroencephalograph technicians, 397 psychologists, 507 psychiatric social workers and to many other categories of professional workers (such as laboratory technicians, nurses aides and occupational therapy aides) who found employment in mental health services."<sup>25</sup>

<sup>20</sup>*Ibid.*

<sup>21</sup>American Psychiatric Association, *Training the Psychiatrist to Meet Changing Needs*, Washington: The Association, 1964.

<sup>22</sup>Canadian Medical Association, brief submitted to the Royal Commission on Health Services, *op. cit.*

<sup>23</sup>National Health Grant allocations for training programs (mainly to university teachers and teaching facilities) were \$368,200 in 1953, and \$363,591 in 1961-62. Canadian Psychiatric Association, *op. cit.*, Appendix 14.

<sup>24</sup>Department of National Health and Welfare, *National Health Grants, 1948-1961*, *op. cit.*, pp. 22-23.

<sup>25</sup>*Ibid.*; *op. cit.*, p. 136.

In view of the fact that there were an estimated 600 psychiatrists in Canada in 1962, the above numbers would seem to refer to 505 bursaries given to a smaller number of psychiatrists during a 13-year period.

During the 8-year period, April 1, 1948, to February 1, 1956, there were 83 persons who had completed formal training courses in psychiatry, with assistance from the Mental Health Grant.<sup>26</sup> Again, this is a smaller number than that described for the 5-year period April 1, 1948, to March 31, 1953, where 193 "psychiatrists" were tabulated as "persons trained and undergoing training under National Health Programs".<sup>27</sup> The number of psychiatrists trained would be less than the number of bursaries reported.<sup>28</sup>

A similar discrepancy exists between the figures of 397 psychologists given bursaries between 1948-1961, and 81 psychologists trained between 1948 and 1956. Attrition is even more marked among social workers. In Ontario,

"...Of the 62 students who received bursary assistance for social work training, 30 are at present employed in a psychiatric facility. This includes eight who are obliged to return a year's service".<sup>29</sup>

## Finances

"The average amount expended on their care is only \$4 a day—too little to do much good for the individual, but too much if measured in terms of efficient use of our mental health dollars."

"Central to a new mental health program is comprehensive community care. Merely pouring Federal funds into a continuation of the outmoded type of institutional care which now prevails would make little difference."<sup>30</sup>

## Historical Comparisons

Annual data on the finances of psychiatric institutions have been published by DBS since 1931. At that time it was estimated that 53 psychiatric institutions had a capital investment of \$42.8 million in buildings, \$6.6 million in furnishings, and \$3.5 million in 17,350 acres of land.

This amount of \$52.9 million was nearly half the \$119.1 million estimated as the capital investment in 445 public general hospitals.<sup>31</sup> In 1932 expenditures on mental institutions (\$10.6 million) were 42 per cent of those for general hospitals (\$25.3 million), as against 21 per cent in 1960.<sup>32</sup>

<sup>26</sup>Department of National Health and Welfare, Mental Health Division, Report on Attrition of Professional Mental Health Personnel in Canada, July 1956.

<sup>27</sup>Department of National Health and Welfare, *National Health Program, Five Year Report*, Ottawa: Queen's Printer, 1953, p. 27.

<sup>28</sup>Fourteen of these 83 psychiatrists were no longer employed in "organized" psychiatric services in Canada in 1956 due to emigration, marriage, private practice, etc.

<sup>29</sup>Ontario Medical Association, brief submitted to the Royal Commission on Health Services, Toronto, May 1962, Appendix No. 16, p. 280/90.

<sup>30</sup>Kennedy, John F., *Mental Illness and Mental Retardation*, 88th Congress, 1st Session, House of Representatives Document No. 58.

<sup>31</sup>Dominion Bureau of Statistics, *Census of Canada, 1931*, Vol. IX, op. cit., pp. 108, 191.

<sup>32</sup>Dominion Bureau of Statistics, *Hospital Statistics*, 1960, op. cit., Vol. VI, p. 27.

Yearly comparisons for provincial and national expenditures per patient-day have been published. The per diem cost of 88 cents in 1932 is compared to \$4.94 for 1960. This comparison is not between similar types of institutions, since up to 1953 the "cost per patient-day has been computed for provincial mental hospitals only, excluding municipal hospitals, psychiatric hospitals, and training schools",<sup>33</sup> while subsequent figures include municipal hospitals, psychiatric hospitals and training schools.

TABLE 11-8  
DAILY EXPENDITURES<sup>1</sup> PER PATIENT-DAY,  
PUBLIC MENTAL INSTITUTIONS,<sup>2</sup>  
CANADA AND PROVINCES, 1932, 1941, 1951, 1956 AND 1960

	1932	1941	1951	1956	1960
CANADA .....	\$0.88	\$0.96	\$2.40	\$3.34 <sup>3</sup>	\$4.94 <sup>3</sup>
Newfoundland .....	—	—	4.60	5.35	8.27
Prince Edward Island .....	0.92	1.28	2.97	2.49	5.23
Nova Scotia .....	0.72	0.84	1.92	2.47	5.80
New Brunswick .....	0.64	0.87	2.08	3.46	4.67
Province of Quebec .....	0.50	0.67	1.47	2.19	2.98
Ontario .....	1.11	1.10	2.66	3.71	5.69
Manitoba .....	0.96	0.98	2.19	3.02	3.93
Saskatchewan .....	0.89	1.07	2.85	3.95	5.95
Alberta .....	1.28	0.89	2.74	3.78	5.63
British Columbia .....	1.10	1.09	3.86	4.69	6.57

<sup>1</sup>Expenditures calculated for provincial mental hospitals only up to 1952; for 1953 and subsequent years municipal mental hospitals, psychiatric hospitals and hospitals for mentally defectives are included.

<sup>2</sup>Excludes private and federal institutions and psychiatric units.

<sup>3</sup>National expenditure per patient-day for mental hospitals was \$3.17 in 1956, and \$4.67 in 1960.

Source: Dominion Bureau of Statistics, *Mental Health Statistics, Financial Supplement*, 1958, p. 9; 1960, p. 10.

The purchasing power of the dollar has also changed. In 1960, tabulations in terms of "constant" (1949) dollars were given, showing that the 1960 cost per patient-day in all public psychiatric institutions, excluding psychiatric units, was \$3.64, and the 1949 cost for patients in public mental hospitals was \$1.94.

### Provincial Comparisons

Provincial comparisons of costs per patient-day are unreliable due to provincial differences in the types of psychiatric institution. Tabulations of provincial expenditures on public mental hospitals are not currently published by DBS.

<sup>33</sup> Dominion Bureau of Statistics, *Mental Health Statistics, Financial Supplement*, 1953, Ottawa: Queen's Printer, 1954, p. 1.



TABLE 11-9  
OPERATING EXPENDITURES IN CONSTANT (1949) DOLLARS,  
PUBLIC MENTAL INSTITUTIONS, CANADA, 1949-1960

Year	Actual Expenditure	Expenditures in Constant (1949) Dollars	
		Total	Per patient-day
	\$'000	\$'000	\$
1949	36,364	36,364	1.94
1950	43,064	40,981	2.12
1951	47,411	41,423	2.10
1952	51,651	44,718	2.19
1953	57,229	48,930	2.31
1954	64,086	54,092	2.46
1955	68,048	56,941	2.49
1956	76,943	62,377	2.72
1957	85,302	66,804	2.90
1958	96,327	74,067	3.14
1959	86,923	64,926	3.97
1960	116,585	85,921	3.64

Source: Dominion Bureau of Statistics, *Mental Health Statistics, Financial Supplement*, op. cit. p. 10.

### *The Components of Expenditures*

"There is indeed need for re-evaluation of what the per diem figures really mean. How can legislative bodies and the public be expected to evaluate the needs of any state unless good cost accounting is made of various services? To compare per diem costs in various states with no knowledge of the exact composition of the figures may be meaningless, if not fallacious."<sup>34</sup>

Brill and Patton<sup>35</sup> have emphasized that per diem costs reflect not only the services provided, but the costs of delivering services under different operating conditions.

Tabulation in the DBS *Financial Supplement* categorize operating costs by

- Salaries and wages
- Medical supplies and medicine
- Food
- Fuel, electricity and water
- Other.

Interprovincial comparisons of these components for similar types of institutional or intra-provincial tabulations for different types of institution are not published by DBS. An example of the differences in per diem cost for various institutions within a single province is found in the Annual Report of the British Columbia Mental Health Division. Not only are there marked differences in

<sup>34</sup>Frew, Carrie N., Statistics submitted...Then what? *Illinois Depart. Publ. Welf., Welf. Bull.* October-December 1959, p. 18.

<sup>35</sup>Brill, H., and Patton, R.E., The evaluation of patients following treatment in a state hospital, in *The Evaluation of Psychiatric Treatment*, (Eds. Hoch, P. H., and Zubin, J.), New York: Grune and Stratton, 1964.

expenditures per patient-day on salaries, and medical supplies, but also for diet, occupational and recreational therapy, laundry, and maintenance of buildings and grounds.

TABLE 11-10  
NET EXPENDITURE PER PATIENT-DAY BY TYPE OF COST AND  
FACILITY, PROVINCIAL MENTAL HEALTH SERVICES, BRITISH  
COLUMBIA, APRIL 1, 1960 — MARCH 31, 1961

	Psychiatric Hospital	Mental Hospital	Hospital for Mentally Retarded	Home for Aged and Senile
	\$	\$	\$	\$
Salaries .....	11.31	3.56	4.66	4.92
Office expense .....	.07	.05	.02	.02
Travel expenses .....	.03	.01	.01	—
Office furniture and equipment .....	.01	.01	.01	—
Heat, light, water, power .....	.28	.27	.21	.25
Medical care supplies .....	.91	.34	.18	.29
Dietary .....	1.35	.96	.97	.83
Laundry .....	.11	.03	.07	.07
General supplies .....	.28	.37	.34	.25
Transportation .....	.05	.01	.01	.02
Occupational and recreational therapy, .....	.15	—	.02	.02
Incidentals and contingencies .....	.01	.03	.04	.02
Buildings and grounds .....	.60	.58	.50	.23
Total .....	15.14	6.17	7.04	6.91

Source: British Columbia Dept. of Health Services and Hospital Insurance, Mental Health Services Branch, *Annual Report for twelve months, ended March 31, 1961, op. cit.*

### Relation between Costs and Quality

#### Although

"...much has been done to measure cost in Hospital Service...little has been attempted in measuring quality, probably because it is more difficult to do. And yet the two are complementary; to consider one without the other is to look at only one side of the coin. Costing cannot provide its maximum contribution in isolation,..."<sup>36</sup>

The relation between costs and quality, through an index of the *cost per patient successfully treated and returned to the community*, has been emphasized both in Britain and the United States. The variables involved in this index require much further study.

Cost per patient-day is an index remaining from the era of asylums where the emphasis was on maintaining the patient rather than curing and discharging him.

"In short stay hospitals the natural entity is the patient's stay in hospital and to convert this into a cost—the cost of making him better—has meaning, whereas to know the cost of keeping him there for a week is only part of the story—the other part being how many weeks it was necessary to keep him there.

<sup>36</sup>Montacute, C., *Costing and Efficiency in Hospitals*, Oxford University Press, 1962.

"... Research on the cost and efficiency of mental hospitals... found that the hospital which appears to be the most expensive in terms of average patient week costs is shown as the cheapest in terms of short stay clinical costs per case. Jones and Sidebotham refer to cost per case of short stay patients as the most realistic quantitative measure of efficiency of a hospital which they have been able to devise."<sup>37</sup> "In our society, with its emphasis on business activity, the success of any enterprise is usually judged by its showing profit, and in the case of a hospital, on the cheapness of its operation. Hospital superintendents and business managers often get engulfed in this assumption and make their decisions on allocations on grounds quite other than the greatest benefit for their patients. It is a rare hospital which uses as an index of its efficiency the *cost per patient successfully treated and returned to the community*. This standard, however, is the only one with any logical basis in the long run."<sup>38</sup>

Further attention should be paid to evolving methods of determining this cost-per-case as a replacement for the fallacious cost per patient-day.

### Psychiatric Clinics and Out-patient Departments

"...the most important field in psychological medicine is outside the mental hospital and in the community."<sup>39</sup>

In spite of the importance of community mental health services there are major deficiencies in national reporting. National reporting of personnel, interviews and patient load in psychiatric clinics and out-patient departments began in 1953. This information was compiled from schedules submitted by the various out-patient facilities (see Appendix 2-3). In contrast to the system for in-patient statistics, there is no uniform statistical system for reporting out-patient activities throughout Canada.

In 1960, 94 clinics in nine provinces (excluding Quebec) reported a total of 354 thousand interviews for 54 thousand patients. In these nine provinces, an average of 165 professional man-hours were worked per 100,000 population per week.<sup>40</sup> This ratio is equivalent to about 4 professionals or 1.2 clinics per 100,000 population. It would seem that these reports might be inflated since they yield a 9-province average of 50 physician-hours per week per 100,000 population, which is 6 per cent higher than the 1959 ratio quoted for the United States.<sup>41</sup>

Current reporting from psychiatric clinics seems unreliable, and further development of adequate local and provincial reporting systems is required, so that more useful national statistics may be derived. In the development of such a statistical system for out-patient clinics, adequate provision should be made for obtaining data which would provide information on the nature and amounts of service provided, as well as the characteristics of patients seen.

<sup>37</sup>*Ibid.*, pp. 186-187.

<sup>38</sup>American Public Health Association, Subcommittee on Tertiary Prevention of the Program Area Committee on Mental Health, *The Prevention of Disability in Mental Disorders*, *op. cit.*

<sup>39</sup>Canada, House of Commons, Special Committee on Social Security, *op. cit.* Brief presented by various Directors of Provincial Mental Health Services, and Professors of Psychiatry, pp. 315-323.

<sup>40</sup>This ratio of man-hours per 100,000 population is not used by Dominion Bureau of Statistics but was derived from their data.

<sup>41</sup>McCarty, C. L., Trends in out-patient psychiatric clinic resources, 1959, *Mental Hygiene* 45:483-493, 1961.

From the 1960 Canadian data it may be calculated that there were in the nine provinces (excluding Quebec) the equivalent of:

159 full-time physicians who averaged 850 interviews per year,  
131 full-time psychologists who averaged 565 interviews per year,  
140 full-time social workers who averaged 774 interviews per year.

If it is assumed that all the reported new patients (N=34,104) were seen by a physician, the average full-time physician saw 214 new patients per year, and the ratio of total interviews to new patients was 4.0:1.

Further information on disposition<sup>42</sup> and the distribution, costs and effectiveness of services to patients is required. In California State Mental Hygiene Clinics during 1960-1961, the net cost per professional employee-hour was \$17.20.<sup>43</sup> Less than one-half of the professional's time was spent in direct clinical services.

"Just over 38 per cent of the total available staff time was spent in direct services to patients in face-to-face contacts, and a little over five per cent was spent in preventive services of an indirect nature to the communities. The remaining 56 per cent of the total available professional staff time includes a significant proportion of time spent in telephone contacts with both patients, collaterals, and local agencies."<sup>44</sup>

Some of the criteria which are required for evaluating the effectiveness of community mental health clinics have been described by Woodward, *et al.*<sup>45</sup>

These criteria include:

A broad spectrum of services to meet varying needs and limitations of individual patients.

A wide diversity of in-referrals and out-referrals, with good lines of communication with major referral sources.

Sound balance between community services to groups and services to patients.

Reasonably low ratio of staff hours to service units.

Moderate service unit costs.

Relatively low average time on rolls, which range from a few weeks to a year, except perhaps for occasional patients.

Low withdrawal rates, especially of treated patients.

Increasing amount of in-service education of professional groups in the community and of clinical consultation with them regarding their patients or clients.

<sup>42</sup> The disposition of terminations from U.S. psychiatric clinics during 1959 was described in this manner: "Clinic experience usually is brief—the median number of interviews is 4 for both children and adults. Patients who were diagnosed and treated had a median of 12 interviews; for those diagnosed only, 3 interviews, and for those receiving other services, 2 interviews..." "One-fourth of the child-patients were withdrawn from clinic services, nearly one-half were terminated by the clinic with referral to other agencies, and one-third clinic-terminated without referral. Among adults, about two-fifths withdrew, one-third were referred to other agencies, and one-fourth terminated without referral". Norman, Vivian B., *et al.*, Psychiatric clinic outpatients in the United States, 1959, *Ment. Hyg.* (N.Y.) 46:321-343, 1962.

<sup>43</sup> This included all professional employees, and excluded \$1.08 per hour recovered in patient fees.

<sup>44</sup> California Department of Mental Hygiene, *Statistical Report for the Year Ending June 30, 1961*, Part IV, Community Psychiatric Facilities, p. 11.

<sup>45</sup> Woodward, L. E., *et al.*, The value of statistical reporting in the planning and revision of community mental health programs, *Amer. J. Orthopsychiat.* 31:292-319, 1961.



Methods for acquiring such data at local and provincial levels should be developed in Canada.

## Conclusions

(i) National tabulations of personnel and finances of psychiatric institutions are unsuitable for reliable assessment of differences in time, provinces, or type of institution.

(ii) Ratios of personnel to patients are difficult to evaluate. Ratios showing the amount of time available from personnel of various degrees of training are needed to assist in the development of better staffing patterns.

(iii) Marked differences in the level of training of all types of personnel are evident.

(vi) Better national tabulations on over-all costs and their components are needed. Attention should be directed to deriving methods for estimating the cost per case.

(v) In 1962 there were more Canadian-born graduates of Canadian medical schools specializing in psychiatry in the United States than were on the staffs of all Canadian psychiatric institutions.

(iv) An additional 2,062 qualified psychiatrists are needed for a realistic satisfaction of Canada's need by 1970. It is unlikely that this can be achieved without marked expansions of university training programmes or considerable changes in the migration of psychiatrists into and out of Canada.

(vii) Despite the importance of community mental health services there are major deficiencies in national reporting. Some of the material reported seems unreliable. Suitable record systems should be developed for local and provincial use, which would provide useful information on the nature, amounts, and results of service provided, as well as the characteristics of patients.



PART III

HOSPITAL CARE IN SELECTED PROVINCES





# TRENDS IN ONTARIO PROVINCIAL HOSPITALS FOR THE MENTALLY ILL AND RETARDED

## Introduction

Variations in the nature and extent of reporting of psychiatric care from the ten provinces between 1932 and 1960 made interpretation of national changes difficult. The definition of first admission varied between provinces and different types of institution. Since data from psychiatric units of general hospitals was included in DBS publications for 1953 and subsequent years there were very few tabulations for 1956 and 1960 which could be directly compared with those for 1932, 1941, and 1951. It is the purpose of this chapter to review the trends in institutions operated by a single province, Ontario. These trends are similar to those which have occurred nationally but are more clearly delineated.

The Mental Health Branch of the Ontario Department of Health publishes annual reports prepared by the Medical Statistics Branch directed by Dr. A. H. Sellers.<sup>1</sup> These statistical reports provide a comprehensive description and analysis of various aspects of psychiatric services within Ontario.<sup>2</sup> It is thus possible to determine the trends of hospital care in a provincially operated system<sup>3</sup> of institutions for the mentally ill and mentally retarded, which has had consistent reporting and uniform definitions for some time.

The number of institutions increased from 11 in 1932 to 18 in 1960. In 1960 special accommodation was available for the "criminally insane", patients with epilepsy or tuberculosis, emotionally disturbed children, and in three hospitals for patients with mental retardation.

## Hospital Accommodation and Occupancy

Between 1932 and 1960 bed capacity increased by 90 per cent from 10,214 to 19,529, but the ratio per 100,000 population increased less than 8 per cent, from

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<sup>1</sup>The Medical Statistics Branch has also published individual reports on hospital care for psychiatric illnesses. Sloman, Joan G., *The Expectation of Admission to an Ontario Mental Hospital*, dupl., Ontario Department of Health, Division of Medical Statistics, March 1955; Ontario Department of Health, Division of Medical Statistics, *The Geriatric Population in Ontario Mental Hospitals*, dupl., August 1959; Sellers, A.H., *A Note on Trends in Mental Illness in Ontario*, dupl., Toronto: Ontario Department of Health, Division of Medical Statistics, January 1960; Ontario Department of Health, Division of Medical Statistics, *Regional Variation in the First Admission Rate, Ontario Mental Hospitals, 1955-1957*, dupl., January 1960.

<sup>2</sup>In addition to data from provincially operated facilities there are reports on community mental health services and psychiatric units of public general hospitals operated by other agencies.

<sup>3</sup>Provincially operated institutions in Ontario had one-third of the national bed capacity in both 1932 and 1960.

298 to 321 per 100,000. The number of patients on the books more than doubled from 11,498 in 1932 to 25,630 in 1960. Due to an increasing proportion of patients on probation, the number of patients in institutions and approved boarding homes increased to a lesser extent, from 11,052 to 21,750. Overcrowding occurred in all years, and was higher during 1951 and 1956 than in 1960.

TABLE 12-1

HOSPITAL ACCOMMODATION AND PATIENT POPULATION,  
ONTARIO MENTAL HOSPITALS AND HOSPITALS FOR THE MENTALLY RETARDED,  
1932, 1941, 1951, 1956 AND 1960

	1932	1941	1951	1956	1960
Population of Ontario (in thousands) .....	3,432	3,788	4,598	5,405	6,089
Standard bed capacity number .....	10,214 <sup>1</sup>	13,164	13,901	16,848	19,529
Ratio per 100,000 population .....	298	348	302	312	321
Patients on books Dec. 31, number .....	11,498	15,490	19,643	23,343	25,630
Patients in institutions <sup>2</sup> Dec. 31, number <sup>1</sup> ...	11,052	14,486	17,220	19,816	20,585
Ratio per 100,000 population.....	318	382	374	367	338

<sup>1</sup>As of June 1, 1931 — Dominion Bureau of Statistics, *Seventh Census of Canada, 1931*, Vol. IX, *Institutions*, *op. cit.*, p. 186.

<sup>2</sup>Excludes patients placed in approved homes, 1951, N. = 632; 1956, N. = 787; 1960, N. = 165.

Source: Ontario Department of Health, Mental Health Branch, *Ninety-Fourth Annual Report of the Mental Health Branch of the Department of Health of the Province of Ontario, Calendar Year 1960*, *op. cit.*; Dominion Bureau of Statistics, *Tenth Annual Report of Mental Institutions, 1941*, *op. cit.*, p. 9; Dominion Bureau of Statistics, *Mental Institutions, 1951*, *op. cit.*, p. 177; Dominion Bureau of Statistics, *Mental Health Statistics, 1956*, *op. cit.*, p. 26; Dominion Bureau of Statistics, *Mental Health Statistics, 1960*, *op. cit.*, p. 36.

## Patient Movement and Annual Increment

In 1936, 3,387 patients entered hospital while a smaller number (N=2,360) left, resulting in an increment of 1,027 patients in the number of patients in hospital by the end of the year. This annual increment, caused by an excess of admissions over separations, has decreased in recent years. During 1960, the over-all increment was 392, but 92 more patients diagnosed as functional psychoses left hospital than were admitted. Patients with mental retardation formed 80 per cent of the over-all increment during 1960.

## First Admissions

During the period 1932-1960, the definition of a first admission *excluded* patients previously treated in psychiatric units of general hospitals or the Toronto Psychiatric Hospital.<sup>4</sup>

### Number

The number of first admissions increased about 140 per cent between 1932 and 1960, from 2,250 to 5,350. The first admission rate increased about 50 per cent from 59 to 88 per 100,000.

<sup>4</sup> Ontario Department of Health, Division of Medical Statistics, *Manual on Recording & Statistics, Ontario Mental Hospitals*, Revised 1957.

TABLE 12-2  
PATIENT MOVEMENT AND ANNUAL INCREMENT,  
PROVINCIALY OPERATED ONTARIO HOSPITALS,  
1936, 1941, 1951, 1956, 1960

	1936	1941	1951	1956	1960
Admissions					
First .....	2,767	2,304	3,568	4,560	5,350
Readmissions .....	620	696	1,106	1,803	3,003
Separations .....					
Discharges .....	1,590	1,974	2,828	4,307	6,317
Deaths .....	770	819	1,124	1,324	1,644
Increment during year (admissions minus separations) <sup>1</sup>					
All diagnoses .....	1,027	207	722	732	392
Schizophrenia and paranoid psychoses..	346	58	144	46	- 34
Affective psychoses .....	156	+ 5	25	+ 17	- 58
Mental retardation .....	..	+ 54	328	343	313

<sup>1</sup> Excludes transfers.

Source: Ontario Department of Health, Hospitals Division, *68th Annual Report upon the Ontario Hospitals for the Mentally Ill, Mentally Subnormal and Epileptic for the year ending March 31, 1936*, Toronto: King's Printer, 1937; Ontario Department of Health, Hospitals Division, *74th Annual Report upon the Ontario Hospitals for the Mentally Ill, Mentally Defective, Epileptic and Habituate Patients of the Province of Ontario for the Year ending March 31, 1941*, Toronto: King's Printer, 1942; Ontario Department of Health, Hospitals Division, *85th Annual Report upon the Ontario Mental Hospitals and Mental Health Services of the Province of Ontario, Calendar Year 1951*, Toronto: Queen's Printer, 1953; Ontario Department of Health, Mental Health Division, *90th Annual Report upon the Ontario Mental Hospitals and Mental Health Services of the Province of Ontario, Calendar Year 1956*, Toronto: Queen's Printer, 1957; Ontario Department of Health, Mental Health Branch, *94th Annual Report of the Mental Health Branch of the Department of Health of the Province of Ontario, Calendar Year 1960*, op. cit.

### Age Distribution

For the various age groups between 25 to 64 the first admission rates increased from a range of 76 to 85 per 100,000 in 1932 to a range of 98 to 109 in 1960. First admission rates for those under 15 doubled in recent years; and rates for the aged population (65+) consistently increased from 114 in 1932 to 242 per 100,000 in 1960. Although increased rates of first admission have occurred for all age groups, the increases were most marked in the younger and older portions of the population.

### Diagnostic Distribution

Between 1932 and 1960 the first admission rates for functional psychoses remained relatively stable, about 28 per 100,000. While the rates for schizophrenia and paranoid psychoses tended to increase, the rates for affective psychoses tended to decrease. Rates have doubled for psychoses of the senium, decreased for syphilis of the central nervous system, and have remained at about 10 to 12 per 100,000 for mental retardation.

**TABLE 12-3**  
**PATIENT MOVEMENT, ANNUAL INCREMENT AND PATIENTS IN RESIDENCE, BY DIAGNOSTIC GROUP AND SEX,**  
**PROVINCIALY OPERATED ONTARIO HOSPITALS, 1936, 1941, 1951, 1956 AND 1960**

	Male					Female				
	1936	1941	1951	1956	1960	1936	1941	1951	1956	1960
<b>ALL DIAGNOSES:</b>										
First admissions.....	1,518	1,218	1,857	2,393	2,820	1,249	1,086	1,711	2,167	2,530
Readmissions.....	340	341	499	848	1,422	280	355	607	955	1,581
Discharges.....	894	997	1,411	2,014	3,206	696	977	1,417	2,293	3,111
Deaths.....	403	443	605	676	819	367	376	519	648	825
Increment during year.....	+561	+119	+340	+551	+217	+466	+88	+382	+181	+175
In residence.....	6,633	7,307	8,686	10,334	10,924	6,509	7,179	8,534	9,482	9,661
<b>Schizophrenia and</b>										
<b>paranoid psychoses:</b>										
First admissions.....	377	340	412	530	627	291	204	418	488	569
Readmissions.....	102	140	195	332	537	87	118	207	387	706
Discharges.....	152	329	456	651	1,048	150	226	443	836	1,201
Deaths.....	111	93	94	97	106	98	96	95	107	118
Increment during year.....	+216	+58	+57	+114	+10	+130	-	+87	-68	-44
In residence.....	3,017	3,503	3,867	4,310	4,053	3,044	3,376	3,840	3,832	3,434
<b>Affective psychoses:</b>										
First admissions.....	201	158	178	217	182	266	239	314	315	310
Readmissions.....	69	91	126	154	193	95	149	226	316	353
Discharges.....	195	198	267	273	365	189	351	468	613	630
Deaths.....	32	37	36	39	39	59	46	48	60	62
Increment during year.....	+43	+14	+1	+59	-29	+113	-9	+24	-42	-29
In residence.....	663	569	492	489	434	859	842	832	775	697
<b>Mental retardation:</b>										
First admissions.....	-	118	325	364	330	-	161	218	262	252
Readmissions.....	-	17	33	32	67	-	16	11	28	40
Discharges.....	-	83	88	121	148	-	115	67	105	93
Deaths.....	-	30	64	63	69	-	30	40	54	66
Increment during year.....	-	+22	+206	+212	+180	-	+32	+122	+131	+133
In residence.....	-	1,416	2,208	2,960	3,475	-	1,446	1,893	2,409	2,792

Source: Ontario Department of Health Annual Reports, *op. cit.*, for 1936, 1941, 1951, 1956 and 1960.



TABLE 12-4

FIRST ADMISSION RATES PER 100,000 POPULATION, BY AGE GROUP,  
PROVINCIALY OPERATED ONTARIO HOSPITALS, 1930-32, 1941, 1951, 1956 AND 1960

Age-Group	1930-32	1941	1951	1956	1960
ALL AGES .....	59	61	78	84	88
0-14 .....	14	13	30	31	26
15-24 .....	54	56	72	94	89
25-34 .....	76	70	83	90	109
35-44 .....	78	81	75	87	98
45-54 .....	80	81	85	87	100
55-64 .....	85	101	98	99	102
65 plus .....	114	137	198	228	242

Source: Wanklin, J.M., *et al.*, The trend of first admission rates to mental hospitals in Ontario, 1927-1946, *Can. J. publ. Hlth*, 45: 246-258, 1954; Ontario Department of Health, *op. cit.*, for 1936, p. 43; Ontario Department of Health, *op. cit.*, for 1941, p. 27; Ontario Department of Health, *op. cit.*, for 1960, p. 29.

TABLE 12-5

FIRST ADMISSIONS, BY SELECTED DIAGNOSTIC GROUP,  
NUMBER AND RATE PER 100,000 POPULATION,  
PROVINCIALY OPERATED ONTARIO HOSPITALS, 1932, 1941, 1951, 1956 AND 1960

	1932	1941	1951	1956	1960
ALL DIAGNOSES					
Number .....	2,250	2,304	3,568	4,560	5,350
Rate .....	65	61	78	84	88
Schizophrenia and paranoid psychoses					
Number .....	560	544	830	1,018	1,196
Rate .....	16	14	18	19	20
Affective psychoses					
Number .....	379	397	492	532	492
Rate .....	11	10	11	10	8
Psychoses of the senium					
Number .....	294	389	719	886	984
Rate .....	8	10	16	16	16
Mental retardation without psychosis					
Number .....	368	279	543	626	582
Rate .....	11	7	12	12	10
Syphilis of central nervous system					
Number .....	130	125	65	33	26
Rate .....	4	3	1	1	..

Source: Ontario Department of Health Annual Reports, *op. cit.*, for 1941, p. 29 and 1960, p. 30.

Expectation of Admission

The expectation or probability of eventual admission to the Ontario Mental Hospital System has been calculated on the basis of first admission and death rates for the years 1955-1957.<sup>5</sup> This calculation *excluded* patients first admitted to psychiatric units of general hospitals. It was concluded that approximately 6.7 per cent of male infants may be expected to require admission to an Ontario Mental Hospital or hospital school at some time during their life. For females the probability was 7.3 per cent.

Readmissions

Readmissions have increased in number, and form an increasing proportion of all admission-events. In 1936, 18 per cent of all admissions were readmissions in comparison to 36 per cent in 1960. The proportion of all readmission-events occurring within one year of previous discharge increased from 25 per cent in 1951 to 46 per cent in 1960.

TABLE 12-6

READMISSIONS WITH LESS THAN ONE YEAR ELAPSED BETWEEN LAST DISCHARGE AND CURRENT READMISSION, PROVINCIALLY OPERATED ONTARIO HOSPITALS, 1941, 1951, 1956 AND 1960

		1941	1951	1956	1960
All Readmissions .....	Number = 100%	696	1,106	1,803	3,003
Readmissions with less than 1 year elapsed before readmission .....	Number	187	279	668	1,395
	Per cent	27	25	37	46

Source: Ontario Department of Health Annual Reports, *op. cit.*, for 1941, p. 73; 1951, p. 68; 1956, p. 73; 1960, p. 80.

Discharges

The mean and median stays for all discharges diagnosed as psychoses, and for discharges diagnosed as schizophrenia decreased between 1944 and 1960.

TABLE 12-7

LENGTH OF STAY IN MONTHS FOR DISCHARGES DIAGNOSED AS PSYCHOSES, AND SCHIZOPHRENIA, PROVINCIALLY OPERATED ONTARIO HOSPITALS, 1937, 1944, 1951, 1956 AND 1960

	1937	1944	1951	1956	1960
All psychoses					
Number .....	1,295	1,360	2,057	2,863	3,955
Mean stay .....	16.6	18.4	13.8	11.2	10.7
Median stay .....	5.5	6.2	5.1	4.3	3.4
Schizophrenia					
Number .....	367	440	846	1,408	2,125
Mean stay .....	23.0	22.8	15.5	14.8	13.1
Median stay .....	8.9	8.5	5.8	5.0	3.8

Source: Ontario Department of Health, *op. cit.* for 1960, p. 40.

<sup>5</sup>Sloman, Joan G., *op. cit.*

Also the proportion of admissions remaining in hospital at the end of the year of admission has decreased from 60 per cent in 1936 to 34 per cent in 1960. As mentioned previously this index relates the number of individuals remaining to the number of admission-events.

TABLE 12-8

PROPORTION OF ADMISSIONS REMAINING IN HOSPITAL AT THE END OF THE YEAR OF ADMISSION, PROVINCIALY OPERATED ONTARIO HOSPITALS, 1936, 1941, 1951, 1956 AND 1960

	1936	1941	1951	1956	1960
<b>ALL DIAGNOSES</b>					
Admission — Number	3,387	3,000	4,674	6,363	8,353
Events — Per cent	100	100	100	100	100
Individuals remaining in hospital at Dec. 31 — Per cent	60	53	49	44	34
<b>Schizophrenia</b>					
Admission — Number	—	755	1,151	1,646	2,315
Events — Per cent	—	100	100	100	100
Individuals remaining in hospital at Dec. 31 — Per cent	—	66	52	47	33

Source: Ontario Department of Health Annual Reports, *op. cit.*, for 1936, p. 55; 1941, p. 78; 1951, p. 81; 1956, p. 88; 1960, p. 96.

## Deaths

The number of deaths increased consistently between 1936 and 1960 from 770 to 1,644. The proportion of deaths among all separations decreased from 33 per cent in 1936 to 21 per cent in 1960.

During the five-year period 1956-1960, there were 7,387 deaths of whom 73 per cent were patients over the age of 65, and 4 per cent were children below the age of 15. In both of these age groups, under 15 and over 65, more patients died than were discharged.

TABLE 12-9

DISCHARGES AND DEATHS AMONG CHILDREN AND THE AGED, PROVINCIALY OPERATED ONTARIO HOSPITALS, FIVE-YEAR PERIOD, 1956-1960

	All ages	Under 15 years	65 years and over
Discharges .....	26,357	269	2,460
Deaths .....	7,387	305	5,397

Source: Ontario Department of Health, *op. cit.*, for 1960, pp. 38 and 41.

## Residents in Hospital

### Number

The absolute number of patients in institutions nearly doubled from 11,052 in 1932 to 20,585 in 1960, while the ratio per 100,000 population increased 6 per cent from 318 to 338. The ratio of resident patients to population decreased annually from a peak of 374 per 100,000 in 1951 to 338 per 100,000 in 1960.

### Age Distribution

Between 1941 and 1960 the ratios increased markedly for those under 15 and those over 65, increased slightly for the group aged 15-24, and have progressively decreased for those aged 25-64. The proportion of residents who were children under 15, or over the age of 65, increased from 15.7 per cent in 1941 to 31.6 per cent in 1960.

TABLE 12-10

PATIENTS IN RESIDENCE,<sup>1</sup> RATIO PER 100,000 POPULATION BY AGE GROUP,  
AND AGE DISTRIBUTION, PROVINCIALY OPERATED ONTARIO HOSPITALS,  
1941, 1951, 1956 AND 1960

Age Group	1941	1951	1956	1960
RATIO PER 100,000 POPULATION	385	388	381	357
All Ages				
0-14.....	48	80	98	108
15-24.....	241	228	262	268
25-34.....	396	317	302	269
35-44.....	546	481	428	364
45-54.....	714	666	614	548
55-64.....	886	777	776	767
65 plus.....	696	854	974	984
Age Distribution				
0-14 Number .....	500	988	1,585	2,068
Per cent of all patients .....	3.4%	5.5	7.7	9.5
65 plus Number .....	1,788	3,419	4,428	4,796
Per cent of all patients .....	12.3%	19.2	21.5	22.1

<sup>1</sup>Includes patients in approved homes.

Source: Ontario Department of Health, *op. cit.*, for 1941, p. 27; and 1960, p. 26.

### Diagnostic Distribution

While the absolute number of patients with functional psychoses increased between 1936 and 1956, the population ratios decreased from 210 per 100,000 in 1936 to 182 per 100,000 in 1956.<sup>6</sup> Affective psychoses decreased to a greater degree than schizophrenia and paranoid psychoses, but the latter decreased from 168 per 100,000 in 1936 to 133 in 1960. At the end of 1960 there were 7,487 residents with schizophrenia and paranoid psychoses in mental hospitals in comparison to 7,707 in 1951.

<sup>6</sup>The ratio of residents with functional psychoses has decreased consistently since 1947.



FIGURE 12-1

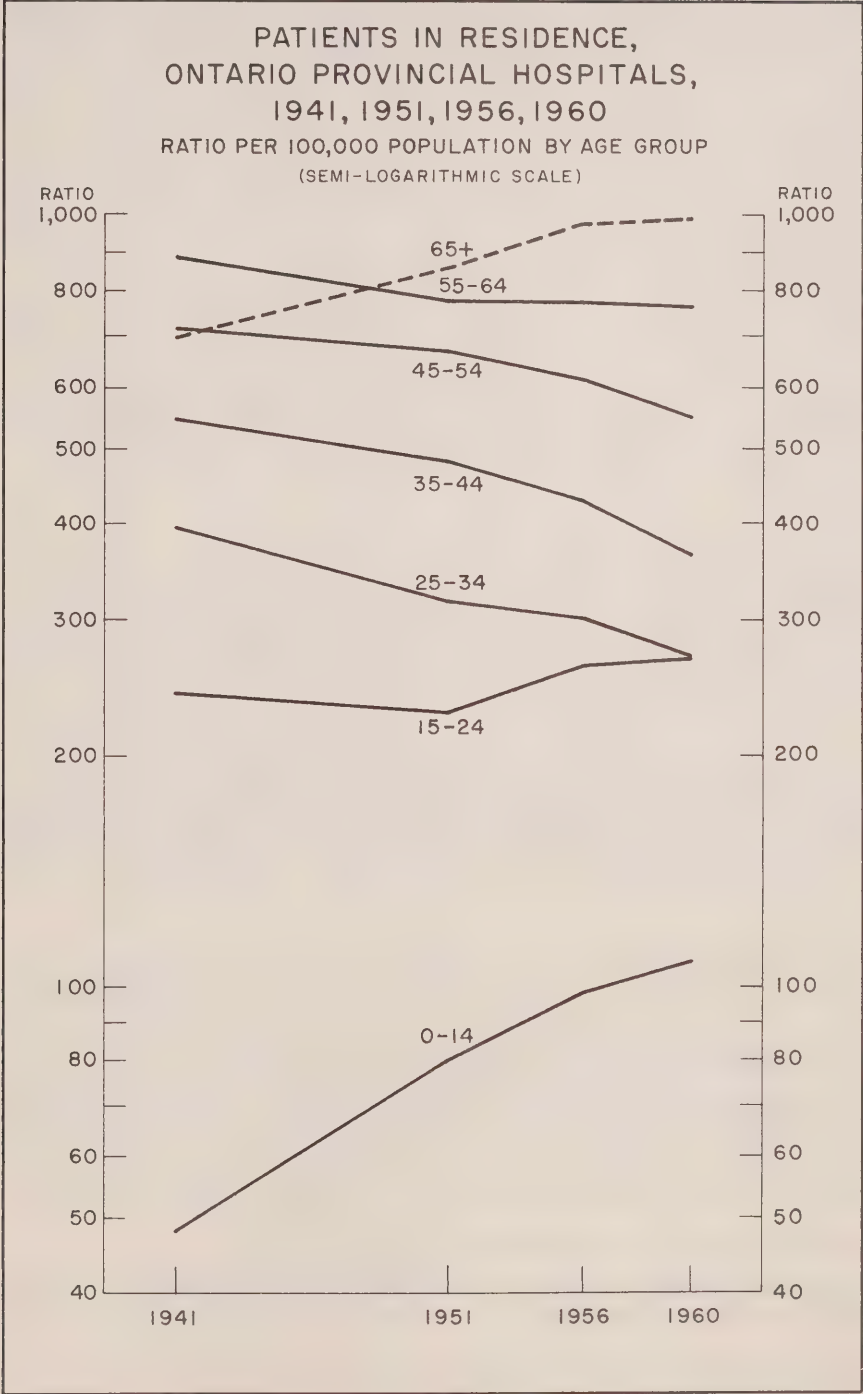


TABLE 12-11

PATIENTS IN RESIDENCE,<sup>1</sup> NUMBER AND RATIO PER 100,000 POPULATION BY MAJOR DIAGNOSTIC GROUPS, PROVINCIALLY OPERATED ONTARIO HOSPITALS, 1936, 1941, 1951, 1956 AND 1960

	1936	1941	1951	1956	1960
<b>ALL DIAGNOSES</b>					
Number .....	13,142	14,486	17,852	20,603	21,750
Ratio .....	365	385	388	381	357
<b>Schizophrenia and paranoid psychoses</b>					
Number .....	6,061	6,879	7,953	8,487	8,075
Ratio .....	168	183	173	157	133
<b>Affective psychoses</b>					
Number .....	1,522	1,411	1,398	1,368	1,241
Ratio .....	42	38	30	25	20
<b>Psychoses of the senium</b>					
Number .....	762	752	1,169	1,612	1,727
Ratio .....	21	20	26	30	28
<b>Mental retardation without psychosis</b>					
Number .....	2,183	2,862	4,305	5,567	6,525
Ratio .....	61	76	94	103	107

<sup>1</sup>Includes patients in approved homes in 1951, 1956, and 1960.

Source: Ontario Department of Health Annual Reports, *op. cit.*, for 1941, p. 29; and 1960, p. 27.

Psychoses of the senium and mental retardation increased. Between 1951 and 1960 the number of residents with mental retardation increased by 2,220 and the population ratio increased from 94 to 107 per 100,000. The proportion of all residents in hospitals for mental retardation increased from 25 per cent in 1937 to 37 per cent in 1960.

#### *Time since Admission*

Between 1931 and 1954, the proportion of residents who had been continuously hospitalized for at least 10 years increased from 35 per cent to 42 per cent.

#### **Differentiation between Treatment Needs and Residential Needs**

It has long been recognized that there were patients in mental institutions who no longer required psychiatric care. At the end of 1895 among the 4,485 patients in Ontario asylums there were 362 "who might be discharged into the custody of friends if assurance existed of their being properly cared for."<sup>7</sup>

In 1962, this was restated in this manner:

"It is generally recognized that there are an undetermined number of mental hospital patients who no longer receive or need psychiatric care. These are persons who have

<sup>7</sup> Ontario, Inspector of Prisons and Public Charities, *28th Annual Report upon the Lunatic and Idiot Asylums of the Province of Ontario for the Year ending 30th September 1895*, Toronto: Warwick Bros. & Roger, 1896.

TABLE 12-12  
PATIENTS IN RESIDENCE,<sup>1</sup> BY TIME SINCE ADMISSION, PROVINCIALY OPERATED  
ONTARIO HOSPITALS,  
1931, 1949 AND 1954

	June 1, 1931		Oct. 31, 1949		Dec. 31, 1954	
	Number	%	Number	%	Number	%
TOTAL .....	10,328	100.0	16,899	100.0	19,581	100.0
Under 5 years .....	4,494	43.5	6,110	36.2	8,018	40.9
5 - 10 years .....	2,201	21.3	3,236	19.1	3,304	16.9
10 years and over .....	3,633	35.2	7,553	44.7	8,259	42.2

<sup>1</sup> Includes patients in approved boarding homes 1949 & 1954.

Source: Dominion Bureau of Statistics, *Seventh Census of Canada 1931*, Vol. IX, op. cit., p. 254; Ontario Health Survey Committee, *Report of the Ontario Health Survey*, Toronto: King's Printer, 1950, p. 36; Ontario Department of Health, Hospitals Division, *88th Annual Report upon the Ontario Mental Hospitals and Mental Health Services of the Province of Ontario, Calendar year 1954*, Toronto: Queen's Printer, 1955, p. 57.

no immediate or apparently suitable accommodation to move to in the community. During the past year more than 3,000 of these persons have been identified and are being accommodated in hospital areas which have been declared no longer 'hospital' but rather 'residential accommodation'. These persons are officially discharged from the hospital and are no longer mental hospital patients. On discharge they become residents, qualified for placement in the community when satisfactory living accommodation can be found."

"Although the number of these persons is not yet known it is expected that 'residential unit' accommodation will increase and thus the psychiatric hospital part of each institution will become defined. If it were possible to empty all mental hospitals and start afresh, it could be assured that our institutions would be active psychiatric hospitals and the persons referred to as 'residents' would not accumulate in the patient load for lack of community accommodation. This is not possible but an attempt is now being made to define that part of our institutions that should be 'residential' and that part which should be 'hospital'."

This reclassification involved the redesignation to residential unit accommodation of 951 mental hospital beds in 1961, and an additional 2,781 beds in 1962.<sup>9</sup> During the last six months of 1961, 1,417 patients were admitted to residential units. Nearly one-half (N=673) of these patients had been admitted to the mental hospital at least 10 years previously.<sup>10</sup> In 1962, another 2,826 patients were first admitted to these residential units.<sup>11</sup> Within three years the average

<sup>9</sup>Ontario, Government of Ontario, brief submitted to the Royal Commission on Health Services, Toronto, May 1962, paras. 76-77.

<sup>10</sup>Dominion Bureau of Statistics, *Mental Health Statistics*, 1962, Vol. III, *Institutional Facilities, Services and Finances*, Ottawa: Queen's Printer, 1964.

<sup>11</sup>Ontario Department of Health, Mental Health Branch, *95th Annual Report of the Mental Health Branch of the Department of Health of the Province of Ontario, Calendar Year 1961*, Toronto: Queen's Printer, 1962.

<sup>12</sup>Ontario Department of Health, *38th Annual Report for the Year 1962*, Toronto: Queen's Printer, 1963.

number of patients in Ontario public mental hospitals decreased 23 per cent from 17,343 in 1960<sup>12</sup> to 13,354 in 1963.<sup>13</sup>

### Hospital Accommodation for Patients with Mental Retardation

Trends in institutions for the mentally retarded differ from the trends in mental hospitals. While the first admission rate to hospitals for the mentally retarded has not increased, the residence rate for patients in hospitals for the mentally retarded has increased steadily.

TABLE 12-13  
FIRST ADMISSIONS TO ONTARIO MENTAL HOSPITALS AND  
HOSPITALS FOR THE MENTALLY RETARDED,  
NUMBER AND RATE PER 100,000 POPULATION,  
1937-1960

Year	Popul- ation of Ontario	Mental Hospitals		Hospitals for Mentally Retarded		Total	
		Number	Rate	Number	Rate	Number	Rate
1937 .....	3,637.0	2,084	57.3	452	12.4	2,536	69.7
1938 .....	3,672.0	2,172	59.2	464	12.6	2,636	71.8
1939 .....	3,708.0	2,107	56.8	505	13.6	2,612	70.4
1940 .....	3,747.0	2,099	56.0	442	11.8	2,541	67.8
1941 .....	3,787.7	1,934	51.0	370	9.8	2,304	60.8
1942 .....	3,884.0	1,880	48.4	490	12.6	2,370	61.0
1943 .....	3,915.0	1,864	47.6	395	10.1	2,259	57.7
1944 .....	3,963.0	1,839	46.4	430	10.8	2,269	57.2
1945 .....	4,000.0	1,844	46.1	314	7.9	2,158	54.0
1946 .....	4,093.0	2,094	51.2	426	10.4	2,520	61.6
1947 .....	4,176.0	2,279	54.6	434	10.4	2,713	65.0
1948 .....	4,275.0	2,646	61.9	386	9.0	3,032	70.9
1949 .....	4,378.0	2,670	61.0	386	8.8	3,056	69.8
1950 .....	4,471.0	2,757	61.7	530	11.8	3,287	73.5
1951 .....	4,597.6	2,918	63.5	650	14.1	3,568	77.6
1952 .....	4,788.0	3,069	64.1	615	12.8	3,684	76.9
1953 .....	4,941.0	3,325	67.3	657	13.3	3,982	80.6
1954 .....	5,115.0	3,241	63.4	681	13.3	3,922	76.7
1955 .....	5,266.0	3,513	66.7	747	14.2	4,260	80.9
1956 .....	5,404.9	3,794	70.2	766	14.2	4,560	84.4
1957 .....	5,622.0	4,073	72.4	754	13.4	4,827	85.8
1958 .....	5,803.0	4,208	72.5	728	12.5	4,936	85.0
1959 .....	5,952.0	4,306	72.4	810	13.6	5,116	86.0
1960 .....	6,089.0	4,675	76.8	675	11.1	5,350	87.7

Source: Ontario, Department of Health, *Thirty-Sixth Annual Report for the Year 1960*, Toronto: Queen's Printer, 1961.

<sup>12</sup>Dominion Bureau of Statistics, *Mental Health Statistics, 1960*, Ottawa: Queen's Printer, 1962, p. 36.

<sup>13</sup>Dominion Bureau of Statistics, *Mental Health Statistics, 1963*, Vol. III, Institutional Facilities, Services and Finances, Ottawa: Queen's Printer, 1965, p. 31.



TABLE 12-14

PATIENTS IN RESIDENCE IN ONTARIO MENTAL HOSPITALS AND  
HOSPITALS FOR THE MENTALLY RETARDED,<sup>1</sup>  
NUMBER AND RATE PER 100,000 POPULATION, AND PERCENTAGE DISTRIBUTION,  
1937-1960

Year	Popul- ation of Ontario (thousands)	Mental Hospitals			Hospitals for Mentally Retarded			Patients in Residence	
		Number	Rate	Per cent	Number	Rate	Per cent	Number	Rate
1937 ....	3,637.0	10,104	278	75	3,383	93	25	13,487	371
1938 ....	3,672.0	10,473	285	75	3,583	98	25	14,056	383
1939 ....	3,708.0	10,474	282	74	3,773	102	26	14,247	384
1940 ....	3,747.0	10,384	277	72	3,930	105	28	14,314	382
1941 ....	3,787.7	10,594	279	73	3,892	103	27	14,486	382
1942 ....	3,884.0	10,688	275	73	4,040	104	27	14,728	379
1943 ....	3,915.0	10,734	274	72	4,092	105	28	14,826	379
1944 ....	3,963.0	10,772	272	72	4,150	105	28	14,922	377
1945 ....	4,000.0	10,830	271	72	4,243	106	28	15,073	377
1946 ....	4,093.0	11,047	270	71	4,424	108	29	15,471	378
1947 ....	4,176.0	11,314	271	71	4,606	110	29	15,920	381
1948 ....	4,275.0	11,813	276	72	4,646	109	28	16,459	385
1949 ....	4,378.0	11,910	272	71	4,844	111	29	16,754	383
1950 ....	4,471.0	12,063	270	70	5,177	116	30	17,240	386
1951 ....	4,597.6	12,322	268	69	5,530	120	31	17,852	388
1952 ....	4,788.0	12,620	264	69	5,773	120	31	18,393	384
1953 ....	4,941.0	12,942	262	68	6,015	122	32	18,957	384
1954 ....	5,115.0	13,327	261	68	6,254	122	32	19,581	383
1955 ....	5,266.0	13,461	255	67	6,626	126	33	20,087	381
1956 ....	5,404.9	13,600	252	66	7,003	129	34	20,603	381
1957 ....	5,622.0	13,794	245	66	7,226	129	34	21,020	374
1958 ....	5,803.0	13,711	236	65	7,419	128	35	21,130	364
1959 ....	5,952.0	13,773	232	64	7,747	130	36	21,520	362
1960 ....	6,089.0	13,619	224	63	8,131	133	37	21,750	357

<sup>1</sup> Includes patients in approved homes.

Source: Ontario Department of Health, *Thirty-Sixth Annual Report, 1960, op. cit., p. 78.*

Table 12-15 illustrates the marked changes in age composition and patient movement during 1960 for these two types of institution. Institutions for the mentally retarded are characterized by their younger population, their low number of separations (relative to residents) and the high proportion of deaths among separations. However, it has been recognized in Ontario that alternative forms of care can reduce or postpone the need for institutional care.

"Hospital beds and hospital days can be saved if greater success is attained in keeping the mentally retarded in the family setting, with appropriate assistance to the family in meeting the special problems which these persons present. Efforts in this direction are hopeful and it has been already established that minimal family training and assistance, together with adequate encouragement, can result in at least a significant postponement of the necessity for institutional admission."<sup>14</sup>

<sup>14</sup>Ontario, brief, *op. cit.*, para 81.

**TABLE 12-15**  
**PATIENT MOVEMENT AND AGE DISTRIBUTION OF PATIENTS**  
**IN MENTAL HOSPITALS, AND HOSPITALS FOR THE MENTALLY RETARDED,**  
**ONTARIO, 1960**

Age	Hospitals for Mentally Ill					Hospitals for Mentally Defective						
	First Admissions	Read-missions	Dis-charges	Deaths	In Resi-dence	On Books	First Admissions	Read-missions	Dis-charges	Deaths	In Resi-dence	On Books
0-14.....	77	7	44	1	69	72	417	5	31	51	1,999	2,416
15-24.....	660	270	784	5	641	1,037	70	6	73	16	1,547	1,914
25-34.....	967	675	1,499	13	1,765	2,455	4	5	16	3	623	691
35-44.....	827	774	1,515	27	2,629	3,355	4	4	5	6	445	462
45-54.....	656	586	1,061	75	3,295	3,852	1	2	2	9	311	318
55-64.....	482	369	723	219	3,467	3,797	3	1	3	7	163	165
65 + .....	1,174	296	558	1,196	4,640	4,939	8	3	3	16	156	157
All ages...	4,843	2,977	6,184	1,536	16,506	19,507	507	26	133	108	5,244	6,123

Note: In residence includes patients in approved homes.

Source: Ontario Department of Health, Mental Health Branch, 94th Annual Report of the Mental Health Branch of the Department of Health of the Province of Ontario, Calendar Year 1960, *op. cit.*, p. 44.

## Conclusions

(i) Trends in hospital care between 1932 and 1960 are more clearly delineated in statistics of Ontario institutions, and substantiate those indicated nationally.

(ii) The expectation of admission to an Ontario Mental Hospital or hospital school was 6.7 per cent for males, and 7.3 per cent for females, on the basis of 1955-1957 admission rates.

(iii) Marked increases have occurred in separations, and the proportion of the population resident in mental hospitals has been decreasing since 1948.

(iv) The age and diagnostic composition of patients in residence has changed considerably. Between 1941 and 1960 the proportion of patients in residence, who were under 15 or over 65 years old, doubled from 16 per cent to 32 per cent. The proportion of patients with functional psychoses decreased, while mental retardation increased.

(v) Separation by death was more likely than discharge for patients over the age of 65 during 1956-1960.

(vi) Over one-fifth of the patients in Ontario public mental hospitals at the end of 1960 were considered to no longer need hospital care and were transferred to residential accommodation by the end of 1963.

(vii) Patients with mental retardation form an increasing proportion of patients in institutions.





# FIRST ADMISSIONS TO PSYCHIATRIC INSTITUTIONS IN BRITISH COLUMBIA AND SASKATCHEWAN

## Introduction

Part II, National Statistics on Psychiatric Care, described some of the many difficulties associated with deriving reliable indices of the nature, distribution, utilization and results of hospital care for psychiatric illnesses. These difficulties are due to such factors as duplication and variation in the reporting of first admissions, incomplete consideration of the effects of such factors as age, diagnostic group, type of institution and area of residence, and the lack of longitudinal studies following groups of patients through a number of episodes of hospital care. The previous chapter has dealt with provincially operated hospitals in Ontario, without including psychiatric units of general hospitals.

The analyses described in the next three chapters were designed to utilize existing records in such a manner that the difficulties mentioned above would be obviated. The objective was to estimate for all psychiatric institutions in a number of provinces:

- Rates of first admission,
- Results of initial hospitalization,
- Rates of readmission, and
- Utilization of hospital care by a cohort of admissions.

The rest of the chapter deals with methodology for this survey of hospital care, and the derivation of rates of first admission.

## Method

### *Selection of Areas*

The provinces selected were those having:

- A range of hospital facilities including psychiatric units in general hospitals as well as mental hospitals;
- Complete card-reporting from all psychiatric institutions;<sup>1</sup>
- Card-reports with sufficient information to identify any duplicated individuals with multiple hospitalizations.

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<sup>1</sup>Card-reporting refers to the reporting to Dominion Bureau of Statistics of the personal and diagnostic characteristics of individual admissions and separations.

In order to provide a sufficient interval for the follow up of admissions, a three-year period was considered necessary. The only provinces satisfying the above criteria for the three most recent years for which data were available (1958-1960) were British Columbia and Saskatchewan.<sup>2</sup>

### *Hospital Care in British Columbia and Saskatchewan*

British Columbia had complete card reporting for admissions to a variety of public, private and federal institutions during 1958-1960. The public institutions included provincially operated mental hospitals, a psychiatric hospital, hospitals for mentally retarded and homes for the aged and senile. In addition there were two psychiatric units in public general hospitals, a psychiatric unit in a federal hospital, and a private psychiatric hospital. Nearly five-sixths of the bed capacity was located within Metropolitan Vancouver, which contained one-half of the Province's population. Outside of Metropolitan Vancouver there was a 24-bed psychiatric unit in Metropolitan Victoria and another 900 beds distributed among a mental hospital, a hospital for mentally retarded and two homes for the aged and senile.

In Saskatchewan, two psychiatric units with 72 beds were located in Regina and Saskatoon. Another psychiatric unit of 22 beds and a hospital for mentally retarded were in Moose Jaw, and a mental hospital in each of North Battleford and Weyburn.

The relative contributions of different types of facility to various aspects of in-patient care during 1959 are shown in Table 13-1. In each province from one-half to three-fourths of the patient-days were spent in overcrowded public mental hospitals, while an additional one-fourth of the patient-days were spent in public hospitals for mentally retarded. Although the bed capacity for intensive treatment in psychiatric units and psychiatric hospitals was 3-5 per cent of the total bed capacity in each province, these facilities cared for about 50 per cent of the first admissions.

During 1959, psychiatric clinics and out-patient departments reported 403 physician-hours per week in British Columbia and 510 in Saskatchewan.<sup>3</sup> Provincial expenditures on community psychiatric services amounted to \$491 thousand in British Columbia during 1961, and \$786 thousand in Saskatchewan during 1962.<sup>4</sup> In 1961, there were 3 psychiatrists in private practice in Saskatchewan<sup>5</sup> and an estimated 30 in British Columbia.

### *Procedure for Collating Records*

This survey was designed and interpreted by the author, but collation, tabulation and analysis of the data were performed by the Public Health Section, Dominion Bureau of Statistics. The method used in this survey of

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<sup>2</sup>The demographic characteristics of these provinces are summarized in Appendix 13-1.

<sup>3</sup>Dominion Bureau of Statistics, *Mental Health Statistics, 1959*, Ottawa: Queen's Printer, 1961, p. 156.

<sup>4</sup>Canadian Psychiatric Association, brief submitted to the Royal Commission on Health Services, *op. cit.*

<sup>5</sup>College of Medicine, University of Saskatchewan, brief submitted to the Royal Commission on Health Services, Regina, January 1962.

TABLE 13-1  
DISTRIBUTION OF PSYCHIATRIC CARE BY TYPE OF PUBLIC INSTITUTION,  
BRITISH COLUMBIA AND SASKATCHEWAN, 1959

	British Columbia					Saskatchewan				
	All Facil- ities <sup>1</sup>	Mental Hospital	Psy- chiatric Hospital	Psy- chiatric Unit	Hospital for Mentally Retarded	Aged and Senile Homes	All Facil- ities	Mental Hospital	Hospital for Mentally Retarded	Psy- chiatric Unit
Patient- days	Number : .. 2,300,318 Per cent : .. 100.0	1,265,678 55.0	82,552 3.6	22,414 1.0	521,316 22.7	386,100 16.8	1,627,682 100.0	1,198,341 73.6	400,260 24.6	29,081 1.8
Average number of patients in hospital .....	6,302	3,468	226	61	1,428	1,058	4,459	3,283	1,097	80
Bed capacity	Number : .. 5,889 Per cent : .. 100.0	2,884 49.0	228 3.9	64 1.1	1,278 21.7	1,319 22.4	3,284 100.0	2,081 63.4	1,109 33.8	94 2.9
Percentage occupancy .....	107	120	99	95	112	80	136	158	99	85
Patients on books, Jan. 1, 1959 .....	6,648	3,848	228	63	1,402	1,032	4,735	3,489	1,179	67
First admissions	Number : .. 2,986 Per cent : .. 100.0	683 22.9	941 31.5	640 21.4	157 5.3	99 3.3	1,488 100.0	765 51.4	32 2.2	691 46.4
Readmissions	Number : .. 2,371 Per cent : .. 100.0	679 28.6	472 19.9	451 19.0	35 1.5	4 0.2	1,034 100.0	528 51.1	4 0.4	502 48.5
Transfers in	Number : .. 604 Per cent : .. 100.0	185 30.6	44 7.3	1 0.2	101 16.7	268 44.4	139 100.0	131 94.2	6 4.3	2 1.5
Discharges	Number : .. 4,885 Per cent : .. 100.0	1,238 25.3	1,413 28.9	997 20.4	70 1.4	17 0.3	2,169 100.0	1,086 50.1	22 1.0	1,061 48.9
Deaths	Number : .. 515 Per cent : .. 100.0	184 35.7	5 1.0	7 1.4	22 4.3	281 54.6	328 100.0	309 94.2	12 3.7	7 2.1
Transfers out	Number : .. 605 Per cent : .. 100.0	306 50.6	57 9.4	87 14.4	103 17.0	14 2.3	143 100.0	23 16.1	6 4.2	114 79.7
Patients on books, Dec. 31, 1959 .....	6,604	3,667	210	64	1,500	1,091	4,756	3,495	1,181	80

<sup>1</sup> Includes data from psychiatric unit of federal hospital and a private psychiatric hospital.

Source: Dominion Bureau of Statistics, *Mental Health Statistics, 1959, op. cit.*, pp. 42-43.

hospital care for first admissions is similar to that described by Sir Arthur Mitchell in 1877, who reported the follow-up of a cohort of first admissions to Scottish psychiatric institutions during 1858.

"1. In this inquiry, all the asylums of Scotland are regarded as one asylum, and the different institutions merely as different wards of the asylum. A patient transferred from one institution to another is thus regarded as never leaving the asylum, but merely as passing from one ward to another. The words—'the asylum'—therefore, in this paper, mean an asylum made up of all the asylums of Scotland."

"2. The inquiry does not deal with the whole population of the asylum. It deals only with the patients who were admitted into it during some single and remote year, and who had never been under asylum treatment before—in other words, who were admitted during the year in question for the first time."

"3. The history of each of these patients is followed from year to year down to a certain fixed period. No cognisance is taken of the existence of any other patients. The wards of the asylum might thus have been empty when these patients went into them, so far as concerns this research, and in like manner no fresh admissions need have occurred during the time over which it extends. The inquiry is limited to the new cases which presented themselves in one remote year; and, at a fixed and comparatively recent period, it is asked, what has become of these patients?—how many of them are still in the asylum?—how many of them have died there?—how many have gone out and returned to it?—how many are out of it?..."

"4. It is important to bear in mind that the whole history of each patient has been separately tabulated."<sup>6</sup>

The original morbidity cards submitted to Dominion Bureau of Statistics are filed by institution and year of event. After the admission and separation cards for the years 1958-1960 were compiled for each province, a 10 per cent sample of reported events was obtained by selecting morbidity cards for patients whose birth year ended in two, i.e., 1952, 1942, 1932, etc.<sup>7</sup> These cards were then arranged by name and birthday in order to match multiple hospitalizations for individuals and to detect duplicated reports of first admissions. This process was repeated twice. In this manner, individuals who had a series of admissions between 1958-1960 in any psychiatric institution of each province had the reports of various hospitalizations collated.

Patients with hospitalizations recorded prior to January 1, 1958, were deleted, as were patients whose earliest hospitalization during the period was reported as a readmission. The survey population consisted of unduplicated individuals, reported as first admissions during the years 1958-1960, for whom records of any subsequent psychiatric hospitalizations in the same province had been brought together.

### *Verification of First Admission Status*

The Mental Health Division, Saskatchewan Department of Public Health, has maintained a confidential card file of patients admitted to provincial psychiatric in-patient and clinic facilities.<sup>8</sup> The list of Saskatchewan patients, compiled by

<sup>6</sup>Mitchell, A., Contribution to the statistics of insanity, *J. ment. Sci.* 22:507-515, 1877.

<sup>7</sup>It was recognized that patients with birth-years ending in zero or five might be over-represented; and the terminal digit two was randomly selected from the eight remaining digits.

<sup>8</sup>The Saskatchewan records are extensive and with the aid of automatic data processing would function as a comprehensive case register.



Dominion Bureau of Statistics was checked against this card file for records of hospitalization prior to January 1, 1958, and for subsequent hospitalizations between 1958 and 1960. This sample of Saskatchewan patients represents unduplicated individuals, reported as first admissions between January 1, 1958, and December 31, 1960, for whom no record of prior psychiatric hospitalization in Saskatchewan was found.

Psychiatric facilities in British Columbia operated under five different auspices, and there was no centralized index. It was not possible within the time limits of this survey to check the card files of each facility. In the facilities operated by the provincial Mental Health Division in British Columbia, a first admission is defined as an admission for the first time to those particular facilities. Patients who have been treated in other hospitals may be recorded as first admissions. In addition, there is considerable immigration from other provinces.<sup>9</sup> An estimate of the degree of over-reporting of first admissions to British Columbia's provincially operated hospitals during 1960-61 was obtained by Drayton.<sup>10</sup> At Crease Clinic, and Provincial Mental Hospital, Essondale, 6.0 per cent<sup>11</sup> of patients, reported as first admissions during 1960-61 had evidence of prior hospital care outside of the Province, and 2.6 per cent had evidence of hospitalization in other psychiatric facilities within the Province before 1958. Since this frequency of 8.7 per cent is based on information supplied by relatives, it is felt that 10 per cent is a reasonable estimate of the degree of over-reporting of first admissions in the unduplicated sample of British Columbia admissions.

#### *Analysis of Data Regarding Admission, Separation, and Readmission*

Data for the personal characteristics and various hospitalizations of an individual were transferred to spread sheets, and thence to punch cards. Rates of discharge, death and readmission were calculated by the Dominion Bureau of Statistics. The separation rates were absolute rates:<sup>12</sup> the rate of discharge being independent of the number of deaths, and the death rate being independent of the number of discharges. Discharge rates did not include those patients discharged against medical advice. The time periods refer to time actually spent in hospital, and not to time on books of the hospital.

The rates of readmission were based on denominators of those patients who had been discharged from hospital. It was not possible to adjust the denominators for any patients who may have died in the community during the follow-up period.

Population-based frequencies of admission were calculated by the author from population estimates for June 1, 1959. These estimates were based on the assumption of geometric change in population size between 1956 and 1961.

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<sup>9</sup>British Columbia has had a significant migration inwards, in contrast to Saskatchewan's outward migration. In 1961 less than 47 per cent of British Columbia's population had been born in British Columbia in contrast to Saskatchewan where 72 per cent of the population had been born in Saskatchewan.

<sup>10</sup>Drayton, R. M., *The Natural History of Hospital Care for Psychiatric Illnesses*, thesis submitted in partial fulfilment of the requirements for the degree of Doctor of Medicine, University of British Columbia, February 1963. See Appendix 13-2.

<sup>11</sup>This is in addition to the 8 per cent of the sample due to duplication in reporting of first admissions.

<sup>12</sup>Calculated according to the method described by Fisher, J. W., and Clarke, E. E., *The Derivation of Rates of Separations from Mental Hospitals*, op. cit.

In addition, various calculations of days of care for patients admitted to Saskatchewan institutions were made by the author. These estimates of utilization were made possible through the co-operation of Dr. F. S. Lawson, Director, Mental Health Division of Saskatchewan Department of Public Health, in making available the individual punch cards prepared by the Dominion Bureau of Statistics.

*Reliability, and Interpretation of Differences between British Columbia and Saskatchewan Data*

The following first admission rates were derived from a 10 per cent sample and are subject to sampling fluctuation. Although the patients from British Columbia are not duplicated they may include patients with prior psychiatric care, and the first admission rates for British Columbia are estimated to be inflated by approximately 10 per cent.

These first admission rates should be considered as providing estimates of the incidence of hospitalized psychiatric illness, rather than comparing the onset of psychiatric illness in the population of the two provinces. In addition to variations due to sampling fluctuations and the definition of first admission, there

TABLE 13-2  
DISTRIBUTION OF FIRST ADMISSIONS  
BY DIAGNOSTIC GROUP AND TYPE OF INSTITUTION,  
UNDULICATED 10 PER CENT SAMPLE OF FIRST ADMISSIONS,  
BRITISH COLUMBIA, 1958-1960

Diagnostic Group	All	Mental Hospitals	Psychiatric Hospitals	Psychiatric Units	Remaining Hospitals <sup>1</sup>
Number of patients					
<i>All Diagnoses</i> .....	871	225	284	155	207
Functional psychoses.....	233	64	100	54	15
Non-functional psychoses.....	189	69	24	13	83
Psychoneuroses.....	214	13	121	61	19
Remaining diagnoses .....	235	79	39	27	90
Percentage distribution of diagnoses					
<i>All Diagnoses</i> .....	100.0%	25.8	32.6	17.8	23.8
Functional psychoses.....	100.0%	27.5	42.9	23.2	6.4
Non-functional psychoses .....	100.0%	36.5	12.7	6.9	43.9
Psychoneuroses.....	100.0%	6.1	56.5	28.5	8.9
Remaining diagnoses .....	100.0%	33.6	15.6	11.5	38.3
Percentage distribution of hospitals					
<i>All Diagnoses</i> .....	100.0%	100.0%	100.0%	100.0%	100.0%
Functional psychoses.....	26.7	28.4	35.2	34.8	7.2
Non-functional psychoses .....	21.7	30.7	8.4	8.4	40.1
Psychoneuroses.....	24.6	5.8	42.6	39.4	9.2
Remaining diagnoses .....	27.0	35.1	13.7	17.4	43.5

<sup>1</sup> Remaining British Columbia hospitals include a private psychiatric hospital, psychiatric unit of a federal hospital, a public hospital for mentally retarded, and a public home for aged and seniles.

Source: Dominion Bureau of Statistics, special tabulations.

were other differences between British Columbia and Saskatchewan which make direct comparison of the over-all rates difficult. The demographic composition of the provinces differed. The type of psychiatric facilities varied, in that British Columbia contained a federal psychiatric unit and a private psychiatric hospital. Within British Columbia the psychiatric facilities were concentrated within metropolitan areas, while in-patient and clinic facilities in Saskatchewan were located in rural areas. The alternatives to psychiatric hospitalization differed in both provinces.

Distribution of Admissions by Type of Institution for First Hospitalization

One-half of the first admissions in British Columbia were admitted to the 292 beds contained in the two public psychiatric units (64 beds) and the psychiatric hospital (228 beds). A higher proportion of patients with functional psychoses (66 per cent) and psychoneuroses (85 per cent) were admitted to these facilities than were patients with non-functional psychoses (20 per cent) and remaining diagnoses (28 per cent). Non-functional psychoses, of whom about two-fifths were alcoholic psychoses and one-third were psychoses of the senium, were mainly admitted to the mental hospital and remaining facilities. The remaining diagnoses (disorders of character, behaviour and intelligence) were under-represented in the psychiatric hospital (17 per cent) and psychiatric units (12 per cent).

TABLE 13-3

DISTRIBUTION OF FIRST ADMISSIONS BY DIAGNOSTIC GROUP AND TYPE OF INSTITUTION, UNDUPLICATED 10 PER CENT SAMPLE OF FIRST ADMISSIONS, SASKATCHEWAN, 1958-1960

Diagnostic Group	All	Mental Hospitals	Psychiatric Units	Hospital for Mentally Retarded
<i>Number of patients</i>				
<i>All Diagnoses</i> .....	412	213	181	18
<i>Functional psychoses</i> .....	119	60	59	—
<i>Non-functional psychoses</i> <sup>1</sup> ..	105	86	19	—
<i>Psychoneuroses</i> .....	93	24	69	—
<i>Remaining diagnoses</i> .....	95	43	34	18
<i>Percentage distribution of diagnoses</i>				
<i>All Diagnoses</i> .....	100.0%	51.7	43.9	4.4
<i>Functional psychoses</i> .....	100.0%	50.4	49.6	—
<i>Non-functional psychoses</i> ...	100.0%	81.9	18.1	—
<i>Psychoneuroses</i> .....	100.0%	25.8	74.2	—
<i>Remaining diagnoses</i> .....	100.0%	45.3	35.8	18.9
<i>Percentage distribution of hospitals</i>				
<i>All Diagnoses</i> .....	100.0%	100.0%	100.0%	100.0%
<i>Functional psychoses</i> .....	28.8	28.2	32.6	—
<i>Non-functional psychoses</i> ...	25.5	40.4	10.5	—
<i>Psychoneuroses</i> .....	22.6	11.3	38.1	—
<i>Remaining diagnoses</i> .....	23.1	20.2	18.8	100.0

<sup>1</sup>About 80 per cent of non-functional psychoses were psychoses of the senium.

Source: Dominion Bureau of Statistics, special tabulations.



In Saskatchewan, the three psychiatric units with a bed capacity of 94 took nearly half of the first admissions. Functional psychoses were equally divided among the two types of facility. Four-fifths of the non-functional psychoses (80 per cent of which were psychoses of the senium) were first admitted to mental hospitals, while three-fourths of the psychoneuroses were admitted to psychiatric units.

There were marked regional differences for Saskatchewan in the proportion of patients admitted to psychiatric units. Among the various diagnostic groups a higher proportion of non-metropolitan patients were admitted to mental hospitals than patients from the metropolitan<sup>13</sup> areas of Regina and Saskatoon.

TABLE 13-4

PERCENTAGE OF PATIENTS FIRST ADMITTED TO PSYCHIATRIC UNITS, BY DIAGNOSTIC GROUP AND GEOGRAPHIC AREA, UNDUPLICATED 10 PER CENT SAMPLE OF FIRST ADMISSIONS, SASKATCHEWAN, 1958-1960

	Regina and Saskatoon		Outside Regina and Saskatoon	
	All N = 100%	Admitted Psychi- atric Units	All N = 100%	Admitted to Psychi- atric Units
Functional psychoses .....	28	82%	91	40%
Psychoses senium .....	17	35%	68	12%
Psychoneuroses .....	29	86%	64	69%

Source: Dominion Bureau of Statistics, special tabulations.

The diagnostic composition of first admissions to the several types of facilities in British Columbia and Saskatchewan varied considerably. Non-functional psychoses and remaining diagnoses made up about one-fourth of first admissions to psychiatric units and the psychiatric hospital in British Columbia, but over two-thirds of the admissions to mental hospitals and the remaining hospitals.

### Rate of First Admission in British Columbia

#### *All Diagnoses*

Annually, 193 individuals per 100,000 total population were reported as first admissions to psychiatric in-patient facilities. This rate increased progressively with age from 30 per 100,000 for children under the age of 15 to 433 per 100,000 for those 65 years and over.

Geographic differences were evident in that the over-all rates were higher in metropolitan areas than in non-metropolitan areas. For the population aged over 65, the frequency of admission was higher in non-metropolitan areas, 483 per 100,000 versus 408 per 100,000. This may be a reflection of the lack of alternatives to hospitalization for the aged population outside of Metropolitan Vancouver and Victoria.

<sup>13</sup> Regina and Saskatoon are not technically defined as metropolitan areas by DBS. According to DBS these cities are sufficiently large to be classed as Census Metropolitan Areas, but they do not have substantial built-up urbanized fringe areas to require this type of classification. Dominion Bureau of Statistics, *Census of Canada 1961*, Ottawa: Queen's Printer, 1963, 1.1-9 B.4.



FIGURE 13-1

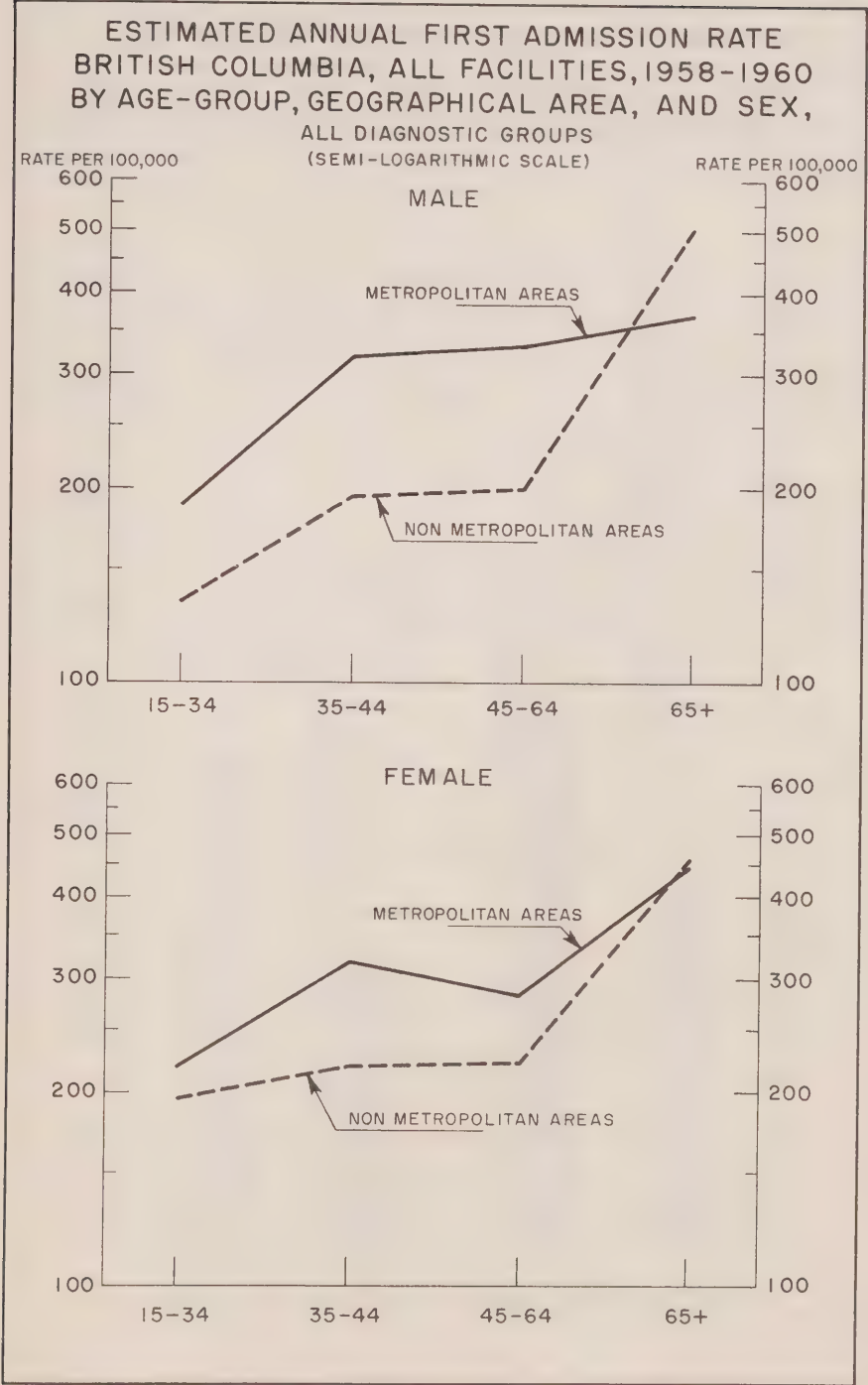


FIGURE 13-2

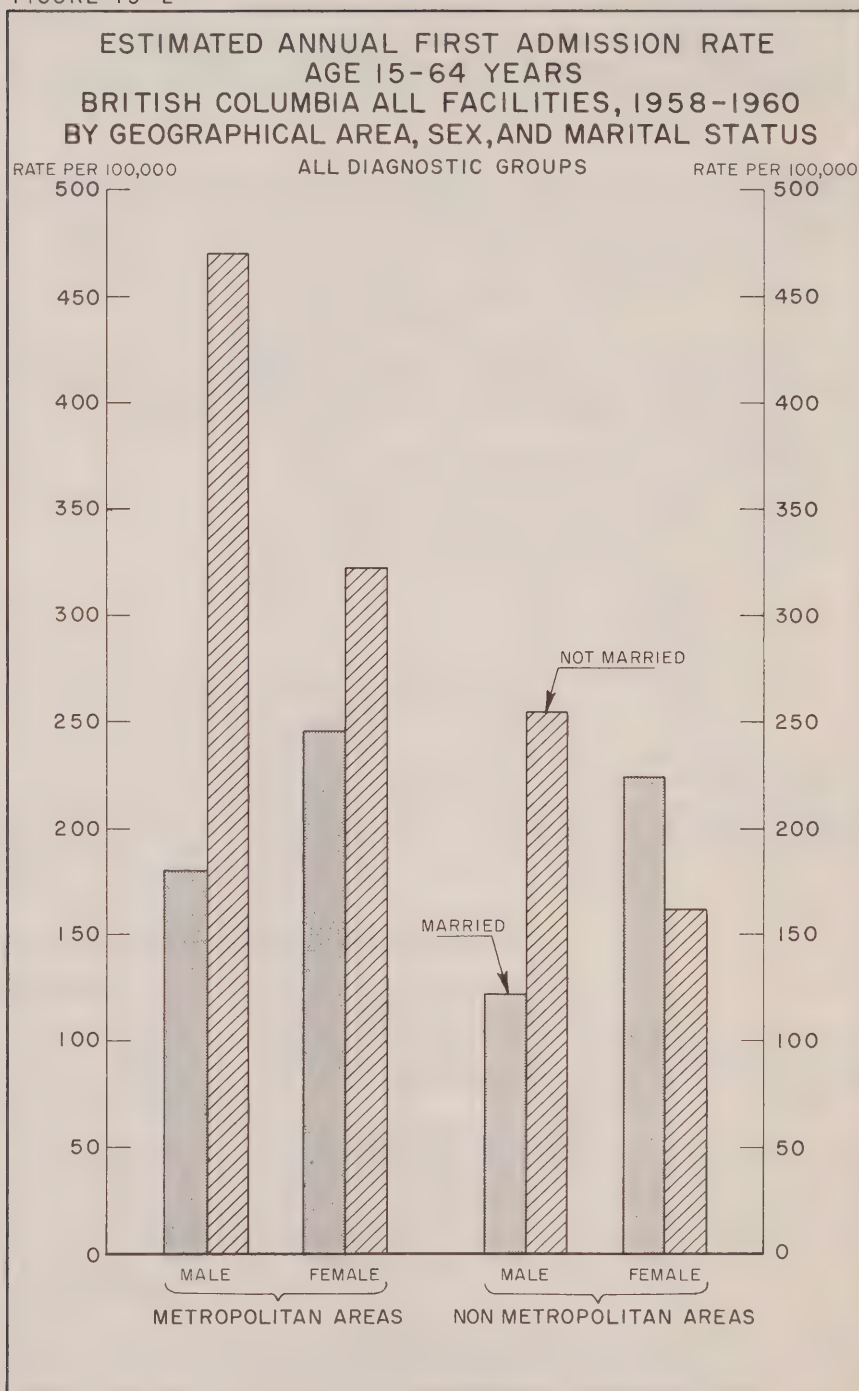
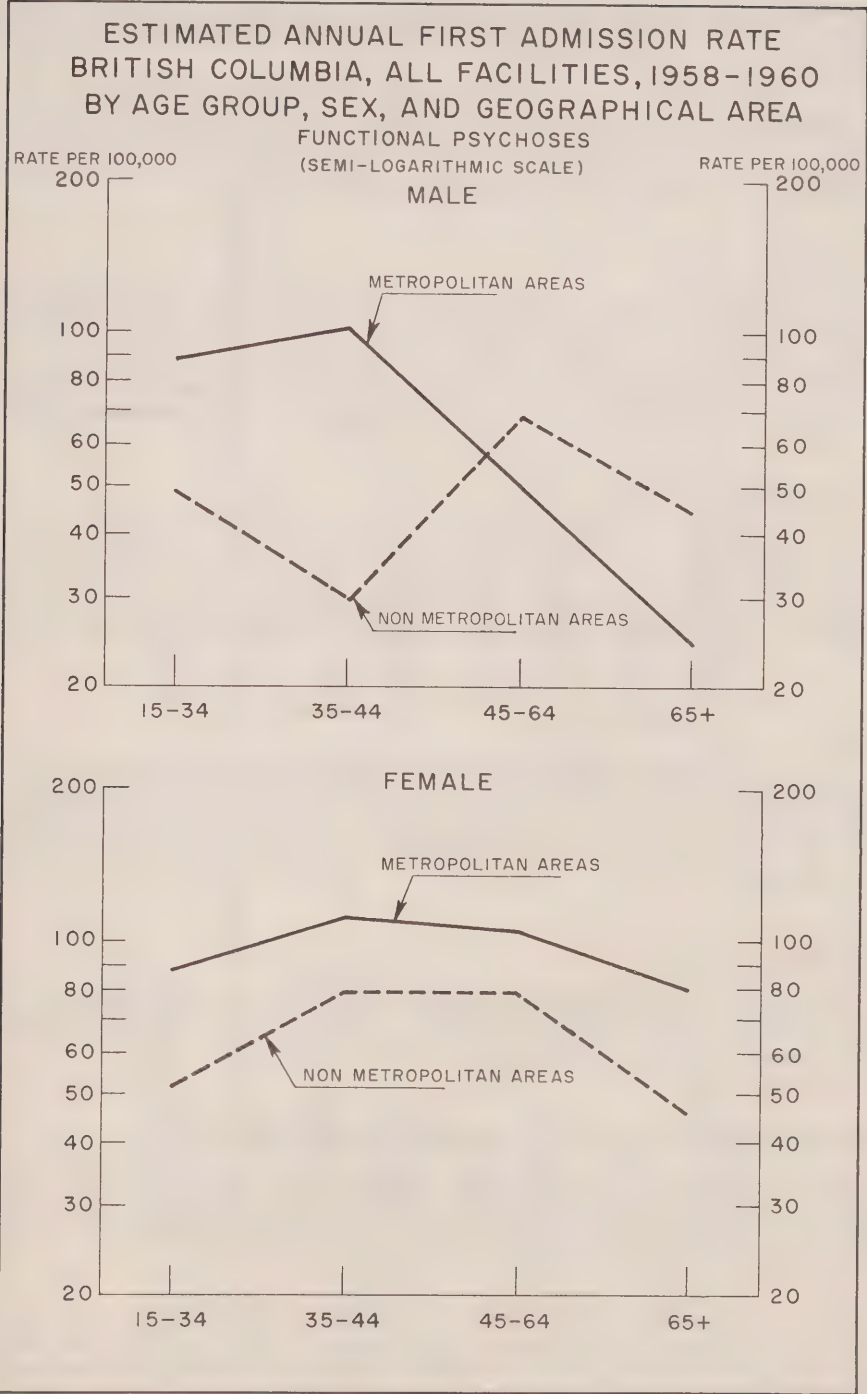


FIGURE 13-3



Within the metropolitan areas admission rates for the population aged 15-64 were equivalent among males and females. In the areas outside of Greater Vancouver and Victoria the rates of admission were higher for females aged 15-64 than for males aged 15-64.

Generally the rates for married males were lower than for not-married males. In metropolitan areas, rates for married females were less than for not-married females; but outside Vancouver and Victoria, the rates for married women were higher than for not-married women.

### *Functional Psychoses*

The admission rate for functional psychoses was 77 per 100,000 population aged 15-64, and was 50 per cent higher in metropolitan areas than in non-metropolitan areas. This geographic difference was more pronounced in males aged 15-44, in whom schizophrenic and paranoid psychoses predominate. Functional psychoses were more frequent in not-married people than in married people.

### *Non-functional Psychoses*

In addition to psychoses of the senium two-fifths of this group included patients diagnosed as alcoholic psychoses. These alcoholic psychoses accounted for the higher metropolitan rate of 51 per 100,000 aged 15-64, which was triple that of the non-metropolitan area. For the age group 65 and over, the majority of whom were psychoses of the senium, the rate was higher in non-metropolitan areas.

### *Psychoneuroses*

The over-all rate for the population aged 15-64 was 72 per 100,000, and was similar for both metropolitan and non-metropolitan areas. Married males had lower rates than those not married while married females had higher rates than those not married. Among married females admission rates were higher from non-metropolitan areas.

### *Remaining Diagnoses*

This group included disorders of character, behaviour and intelligence, and the over-all ratio for the population aged 15-64 was 49 per 100,000 population. Rates were particularly elevated in those 65 years and over.

## **Rate and Expectation of First Admission in Saskatchewan**

The Saskatchewan patient sample had their first admission status verified. Due to the size of the sample population it is not possible to make extensive analyses specific for sex and marital status. Rates specific for geographic area, age and diagnostic group are found in Appendix 13-4.

For the population aged 15-64 the frequency of admission was 181 per 100,000 population. It was higher in metropolitan (200 per 100,000) than in non-metropolitan areas (175 per 100,000). Admission rates for the aged were 5 per cent lower in Regina and Saskatoon than in the other areas.



FIGURE 13-4

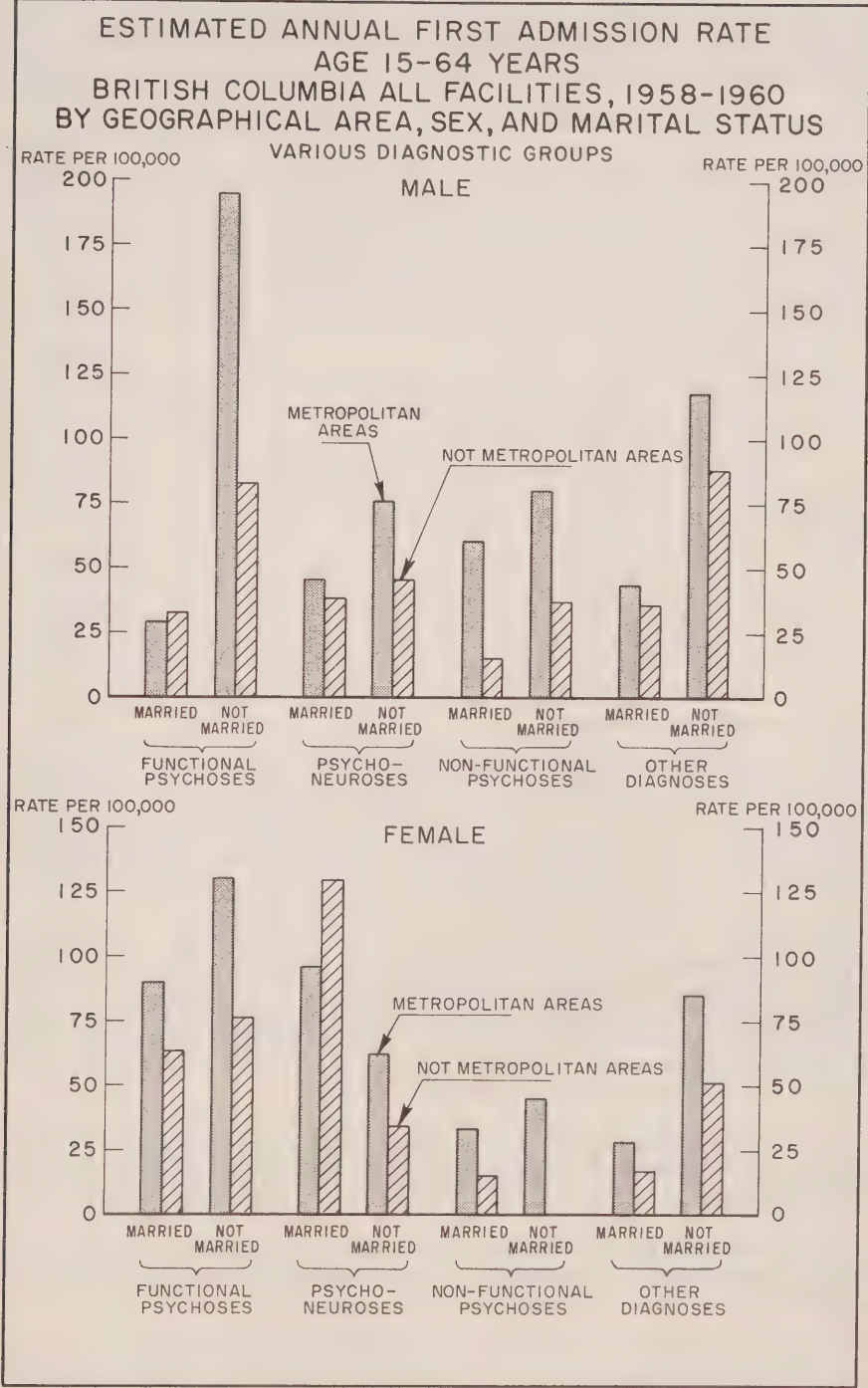


TABLE 13-5

ANNUAL RATE OF FIRST ADMISSION PER 100,000 POPULATION, BY AREA, AGE AND DIAGNOSTIC GROUP, UNDUPLICATED 10 PER CENT SAMPLE OF FIRST ADMISSIONS TO ALL INSTITUTIONS, BRITISH COLUMBIA AND SASKATCHEWAN, 1958-1960

Area	Age Group	All Diagnoses		Functional Psychoses		Non-functional Psychoses		Psycho-neuroses		Remaining Diagnoses	
		B. C.	Sask.	B. C.	Sask.	B. C.	Sask.	B. C.	Sask.	B. C.	Sask.
All .....	15-64	234	181	77	67	37	10	72	54	49	50
	All Ages	193	154	51	45	41	39	47	34	54	37
Metropolitan	15-64	268	200	90	67	51	3	71	73	55	57
	under 15	28	8	—	—	—	—	—	—	28	8
	15-34	206	102	88	26	9	—	59	36	50	41
	35-44	320	266	109	101	60	—	99	126	52	38
	45-64	308	343	78	125	100	10	67	104	63	104
	65+	408	489	53	61	170	346	46	41	139	41
Non-metro-politan .....	15-64	188	175	58	67	18	13	72	48	40	48
	under 15	31	17	—	—	—	—	—	—	31	17
	15-34	164	142	50	62	9	8	54	24	50	48
	35-44	208	250	54	95	27	15	96	80	31	61
	45-64	210	171	73	54	23	18	82	60	32	39
	65+	483	513	45	76	213	371	26	36	200	30

Source: Dominion Bureau of Statistics.

The chances of admission to a psychiatric institution at some time during the life time of a group of individuals may be estimated from rates of admission and mortality. This is outlined in Appendix 13-4. With the first admission rates estimated above it is projected that about one out of eight infants would be hospitalized in a psychiatric institution at some time in their lives. About one-third of these hospitalizations would occur after the age of 65.

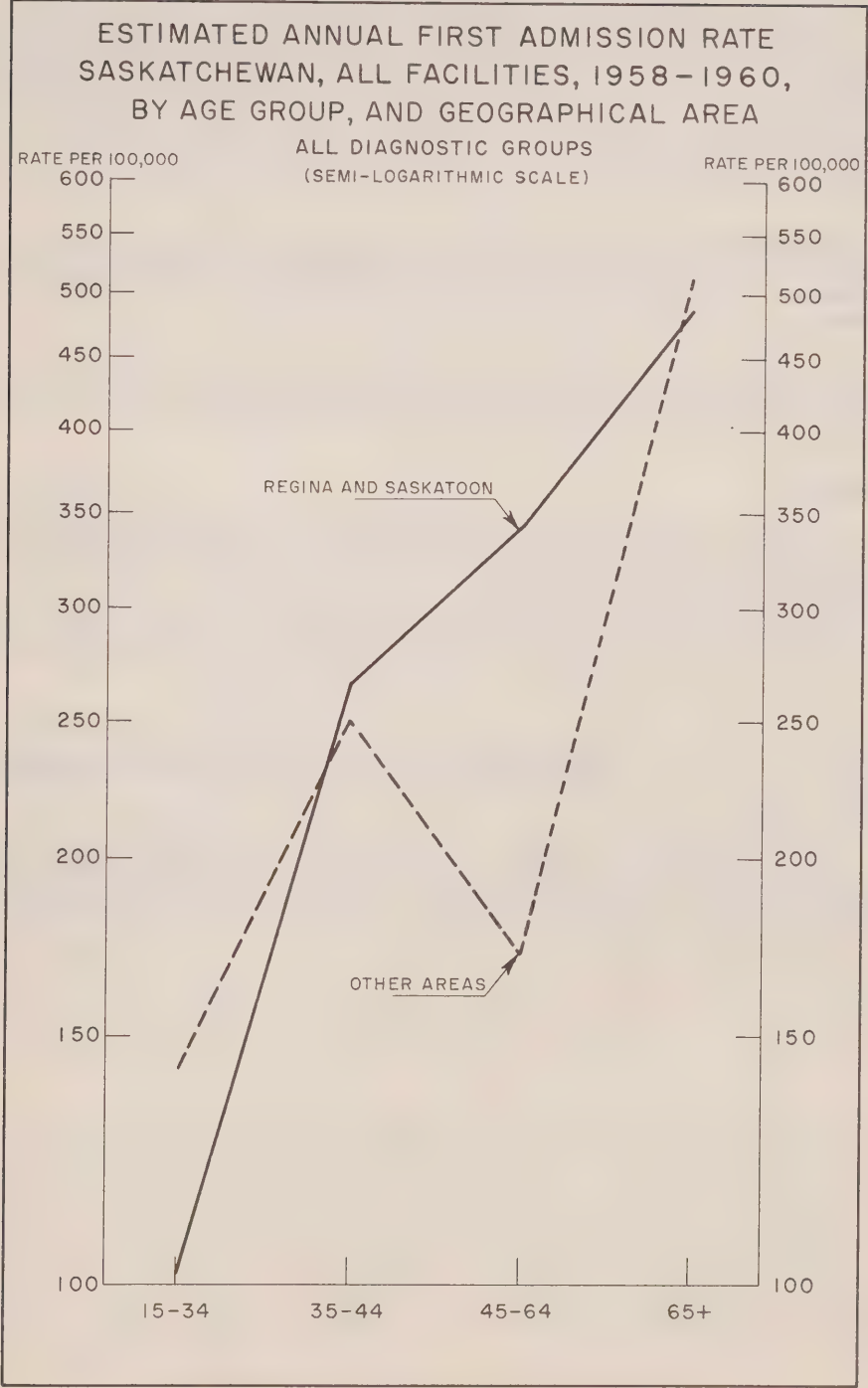
For functional psychoses the frequency of first admission was similar for Regina and Saskatoon and the remainder of the Province, 67 per 100,000 population aged 15-64. Within the various age groups there is a marked geographic difference; metropolitan areas showing a progressive increase from 26 per 100,000 for those aged 15-34, to 125 per 100,000 for those aged 45-64. Outside of Regina and Saskatoon the rates fluctuated less, from 62 per 100,000 for those aged 15-34 to 54 per 100,000 for those aged 45-64.

The non-functional psychoses included mainly psychoses of the senium. Frequency of admission for patients aged 65 and over was 346 per 100,000 population in Regina and Saskatoon and 371 per 100,000 for other areas.

Psychoneuroses among the population aged 15-64 were more frequently admitted from Regina and Saskatoon (73 per 100,000) than from other areas (48 per 100,000).

Finally, the rate of first admission for the remaining diagnoses was also higher in Regina and Saskatoon (57 per 100,000) than from other areas (48 per 100,000) for those aged 15-64.

FIGURE 13-5



### Comparison of Standardized Rates for the Two Provinces

The rates derived for various demographic sub-groups by geographic area within British Columbia were applied to the Saskatchewan population in order to estimate the number of patients that would be expected if Saskatchewan's population had the *same* rates of admission as for British Columbia. The non-standardized rates for the population aged 15-64 were nearly 30 per cent higher in British Columbia, 234 per 100,000 in British Columbia and 181 per 100,000 in Saskatchewan.

By applying the age-sex-marital-residence specific British Columbia rates to Saskatchewan, the number of admissions expected for Saskatchewan was estimated as 3,200 for the three-year period, some 13 per cent higher than that observed.

The difference in estimated rates of first admission to Saskatchewan and British Columbia during 1958-1960 was less marked when the rates were standardized on the basis of similar population characteristics.

### Conclusions

(i) There were marked diagnostic, demographic, and geographic differences in the rates of first admission to psychiatric institutions in both British Columbia and Saskatchewan during 1958-1960.

(ii) About one-fifth of one per cent of the population aged 15-64 were first admissions to psychiatric institutions per year. Functional psychoses and psychoneuroses each made up about one-third of these admissions.

(iii) For patients over the age of 65 the first admission rate was about one-half of one per cent. Although the over-all admission rates were generally higher in metropolitan than non-metropolitan areas, the rates for the aged were lower in metropolitan areas.

(iv) It is projected that about one out of eight infants would be hospitalized in a psychiatric institution at some time in their lives, on the basis of the first admission rates for Saskatchewan. About one-third of these hospitalizations would occur after the age of 65.



## **DISCHARGE AND READMISSION RATES FOR FIRST ADMISSIONS IN BRITISH COLUMBIA AND SASKATCHEWAN**

### **Introduction**

The purpose of this chapter is to estimate the rates of discharge or death, and the frequency of readmission for the sample of first admissions described in the previous chapter. The hospital history subsequent to first admission was determined for the three-year period 1958-1960. Data were tabulated for individual patients and included details of both the first and subsequent hospitalizations up to the end of 1960.

### **Disposition of First Admissions by the End of 1960**

This describes the status at December 31, 1960, of the first hospital event for the sample of patients admitted between January 1, 1958, and December 31, 1960, in British Columbia and Saskatchewan. A similar proportion, 71 per cent of admissions had been discharged from hospital on medical advice by the end of 1960 in each province. Again, similar proportions remained on the books of the same hospital to which they had been first admitted in British Columbia (12 per cent) and Saskatchewan (14 per cent). Deaths were more frequent among the Saskatchewan patients (11 per cent) than among patients for British Columbia (5 per cent). The proportions of patients discharged, remaining, or dead differed considerably according to the type of facility.

Among various diagnostic groups a higher proportion of admissions with functional psychoses had been discharged on medical advice in Saskatchewan (89 per cent) than in British Columbia (79 per cent). In both provinces, non-functional psychoses had the highest proportion dying. The differences in the proportions of this group dying in British Columbia (13 per cent) and Saskatchewan (35 per cent) were due to the inclusion of more psychoses of the senium in Saskatchewan, and a higher proportion of alcoholic psychoses in British Columbia. Over one-fifth of the group with remaining diagnoses remained continuously hospitalized in both provinces largely due to patients with mental retardation.

TABLE 14-1

DISPOSITION AT THE END OF 1960 FOR FIRST HOSPITAL EVENT,  
PERCENTAGE DISTRIBUTION BY FACILITY AND DIAGNOSTIC GROUP,  
UNDULICATED 10 PER CENT SAMPLE OF FIRST ADMISSIONS  
TO PSYCHIATRIC INSTITUTIONS,  
BRITISH COLUMBIA AND SASKATCHEWAN, 1958-1960

	Ad- missions	Discharged on Advice		Discharged against Advice		Dead		Transferred to Other Facility		Remaining <sup>1</sup> on Hospital Books Dec. 31, 1960	
	N= 100%	No.	%	No.	%	No.	%	No.	%	No.	%
<b>FACILITY</b>											
<i>British Columbia</i>											
ALL HOSPITALS.	871	616	70.7	24	2.8	44	5.1	79	9.1	108	12.4
Public mental hospitals .....	225	119	52.9	7	3.1	17	7.6	47 <sup>2</sup>	20.9	35	15.6
Public psych. hospital .....	284	253	89.1	3	1.1	1	0.4	12	4.2	15	5.3
Public psych. unit .....	155	131	84.5	6	3.9	1	0.6	13	8.4	4	2.6
Other hospitals...	207	113	54.6	8	3.9	25	12.1	7	3.4	54	26.1
<i>Saskatchewan</i>											
ALL HOSPITALS.	412	293	71.1	8	1.9	45	10.9	8	1.9	58	14.1
Public mental hospitals .....	213	125	58.7	1	0.5	44	20.7	1	0.5	42	19.7
Public psych. unit .....	181	164	90.6	7	3.9	1	0.6	7	3.9	2	1.1
Public hospital for mentally retarded .....	18	4	22.2	—	—	—	—	—	—	14	77.8
<b>DIAGNOSTIC GROUP</b>											
<i>British Columbia</i>											
ALL DIAGNOSES.	871	616	70.7	24	2.8	44	5.1	79	9.1	108	12.4
Functional psy- choses .....	233	184	79.0	7	3.0	—	—	17	7.3	25	10.7
Non-functional psychoses .....	189	109	57.7	5	2.6	25	13.2	35 <sup>2</sup>	18.5	15	7.9
Psychoneuroses ..	214	193	90.2	3	1.4	2	0.9	5	2.3	11	5.1
Remaining diag. ..	235	130	55.3	9	3.8	17	7.2	22	9.4	57	24.3
<i>Saskatchewan</i>											
ALL DIAGNOSES.	412	293	71.1	8	1.9	45	10.9	8	1.9	58	14.1
Functional psy- choses .....	119	106	89.1	2	1.7	2	1.7	2	1.7	7	5.9
Non-functional psychoses .....	105	34	32.4	—	—	37	35.2	4	3.8	30	28.6
Psychoneuroses ..	93	89	95.7	3	3.2	—	—	—	—	1	1.1
Remaining diag. ..	95	64	67.4	3	3.2	6	6.3	2	2.1	20	21.0

<sup>1</sup> Includes patients admitted between Jan. 1, 1958, and Dec. 31, 1960, and remaining continuously in the same hospital until Dec. 31, 1960.

<sup>2</sup> Majority of these patients were psychoses of the senium transferred to a home for the aged and senile.

Source: Dominion Bureau of Statistics, special tabulations.

## Rates of Discharge and Death

### Method of Calculation

Absolute rates of discharge<sup>1</sup> on medical advice (or death) were calculated by actuarial methods. These absolute rates compensate for possible differences in the number of patients withdrawn from the risk of medically authorized discharge by death, transfer, discharge against medical advice and are thus comparable between populations with different numbers of patients dying, being transferred, or discharged against advice.

The basic tabulations for these calculations are in Appendix 14-1. In British Columbia the number of admissions to mental hospital was 225, and the number exposed to the risk of discharge on medical advice during the first month was the number admitted minus one-half the number not exposed to risk of discharge during all of the first month, i.e.,

$$225 - \frac{(8+40+2+5)}{2} = 197.5$$

The absolute rate of discharge on medical advice during the first month of hospital care was estimated as  $\frac{30}{197.5} = 15.2\%$

Similarly the absolute rate of death within one month was estimated by

$$\frac{8}{225 - \frac{(30+40+2+5)}{2}} = 4.3\%$$

It is emphasized that the absolute rates of discharge and death are independent of one another and cannot be added to give the absolute rate of combined discharge and death. Absolute rates of discharge were calculated for each duration interval, and then converted into cumulative proportions discharged by the end of specified intervals. Thus, the one-year discharge rate of 83.8 per cent for British Columbia is based on absolute discharge rates of 34.3 per cent for 0-1 month, 62.5 per cent for 1-4 months, and 34.0 per cent for 4-12 months. Since no exact standard errors or confidence intervals are available for rates computed by "maximum utilization" of the life table method they were not calculated.<sup>2</sup>

### Rates at End of One Month Following Admission

Although the over-all discharge rates were similar in British Columbia (34 per cent) and Saskatchewan (36 per cent), this was due to the higher discharge rates for non-functional psychoses in British Columbia. As described previously, two-fifths of non-functional psychoses in British Columbia were alcoholic psychoses in contrast to a negligible proportion in Saskatchewan. The one-month discharge rates for functional psychoses were twice as high in Saskatchewan (31 per cent) as in British Columbia (16 per cent). Discharge rates for psychoneuroses and miscellaneous diagnoses were also higher in Saskatchewan than in British Columbia.

<sup>1</sup>The rationale for selecting discharge rates as the criterion for determining the results of hospitalization is based on regarding the primary goal of hospitalization as the return of patients to the community in the shortest possible time.

<sup>2</sup>Ederer, F., A simple method for determining standard errors of survival rates, with tables. *J. Chron. Dis.* 11:632-645, 1960.

TABLE 14-2

WORK SHEET SHOWING CALCULATION OF ABSOLUTE RATES AND COMPUTATION OF CUMULATIVE PROPORTION DISCHARGED (OR DYING) WITHIN ONE YEAR, UNDUPLICATED 10 PER CENT SAMPLE OF FIRST ADMISSIONS TO MENTAL HOSPITALS, BRITISH COLUMBIA, 1958-1960

Time since Admission (days)	Number Entered Hospital	Discharged on Medical Advice	Died	Transferred	Discharged against Medical Advice	Withdrawn from Observation during Interval	Effective No. Exposed to the Risk of Dis- charge on Advice <sup>1</sup>	Discharge Rate per 1,000 <sup>2</sup>	Cohort	Discharges from Cohort	Cumulative Per- centage Discharged <sup>3</sup>	Effective No. Exposed to Risk of Death	Death Rate per 1,000 <sup>2</sup>	Cohort	Death among Cohort	Cumulative Per- centage Dying <sup>3</sup>
0-29	225	30	8	40	2	5	197.5	152	1,000	152	15.2	186.5	43	1,000	43	4.3
30-120	140	60	4	6	1	7	131	458	848	388	54.0	103	39	957	37	8.0
121-364	62	24	3	-	3	8	55	436	460	200	74.0 <sup>4</sup>	44.5	67	920	62	14.2
365-	24	5	2	1	1	15										

<sup>1</sup> It is assumed that patients leaving hospital during an interval for reasons other than for discharge on medical advice were exposed to the risk of discharge, on the average, for one-half the interval.

<sup>2</sup> This ratio is an absolute rate. It is the ratio of the number of persons leaving observation during the duration interval because of that decrement to the average number of persons exposed to the risk of that decrement during the duration interval.

<sup>3</sup> The cumulative proportions discharged and dying are independent of one another, and may not be added to estimate the proportion neither discharged nor dying.

<sup>4</sup> This ratio represents the proportion estimated to have been discharged on medical advice within one year of admission if there had been no alternative methods of leaving hospital.



Consistently, for each diagnostic group in both provinces, discharge rates were higher for patients from metropolitan areas than for those from non-metropolitan areas. Whether this is due to patients in metropolitan areas being closer to psychiatric facilities and therefore being admitted at an earlier stage of illness, or being discharged earlier for continuing care in the community can not be differentiated.

Death rates were highest for non-functional psychoses, 12 per cent in Saskatchewan and 6 per cent in British Columbia.

TABLE 14-3  
ABSOLUTE RATES OF DISCHARGE AND DEATH  
WITHIN ONE MONTH OF FIRST ADMISSION,<sup>1</sup>  
UNDUPLICATED 10 PER CENT SAMPLE OF FIRST ADMISSIONS  
TO ALL PSYCHIATRIC FACILITIES,  
BRITISH COLUMBIA AND SASKATCHEWAN, 1958-1960

	Saskatchewan			British Columbia		
	No. of Patients	Rates (%)		No. of Patients	Rates (%)	
		Discharge on Advice	Death		Discharge on Advice	Death
ALL DIAGNOSES						
Province .....	412	36	5	871	34	2
Functional psychoses						
Metropolitan .....	28	44	—	160	19	—
Non-metropolitan .....	91	27	3	73	10	—
Province .....	119	31	2	233	16	—
Non-functional psychoses <sup>2</sup>						
Metropolitan .....	18	20	26	136	50	6
Non-metropolitan .....	87	13	10	53	22	5
Province .....	105	14	12	189	42	6
Psychoneuroses						
Metropolitan .....	29	60	—	128	52	—
Non-metropolitan .....	64	57	—	86	38	—
Province .....	93	58	—	214	46	—
Remaining Diagnoses						
Metropolitan .....	24	59	6	145	37	1
Non-metropolitan .....	71	37	5	90	34	4
Province .....	95	42	5	235	36	2

<sup>1</sup>Absolute rates of discharge and death are independent of one another, and cannot be added. No. of patients represents the total number admitted during the three-year period.

<sup>2</sup>Non-functional psychoses in Saskatchewan were mainly psychoses of aging; but in British Columbia includes a large proportion of alcoholic psychoses.

Source: Dominion Bureau of Statistics, special tabulations.

#### *Rates at End of Four Months Following Admission*

By the end of four months, the over-all discharge rates were 75 per cent in both provinces. The discharge rate for functional psychoses was still higher in

Saskatchewan (89 per cent) than in British Columbia (74 per cent), but the marked difference between metropolitan and non-metropolitan patients no longer obtained. Nearly all of the patients with psychoneuroses had been discharged in both provinces.

Absolute rates of death for non-functional psychoses had increased to 29 per cent in Saskatchewan and 18 per cent in British Columbia.

**TABLE 14-4**  
CUMULATIVE ABSOLUTE RATES OF DISCHARGE AND DEATH WITHIN FOUR MONTHS OF FIRST ADMISSION, UNDUPLICATED 10 PER CENT SAMPLE OF FIRST ADMISSIONS TO ALL PSYCHIATRIC FACILITIES, BRITISH COLUMBIA AND SASKATCHEWAN, 1958-1960

	Saskatchewan			British Columbia		
	No. of Patients	Rates (Percentage)		No. of Patients	Rates (Percentage)	
		Discharge on Advice	Death		Discharge on Advice	Death
ALL DIAGNOSES						
Province .....	412	76	14	871	75	6
Functional psychoses						
Metropolitan .....	28	88	—	160	73	—
Non-metropolitan .....	91	90	3	73	77	—
Province .....	119	89	2	233	74	—
Non-functional psychoses						
Metropolitan .....	18	29	26	136	79	18
Non-metropolitan .....	87	36	29	53	43	17
Province .....	105	35	29	189	69	18
Psychoneuroses						
Metropolitan .....	29	100	—	128	95	3
Non-metropolitan .....	64	96	—	86	95	4
Province .....	93	97	—	214	95	4
Remaining diagnoses						
Metropolitan .....	24	82	6	145	66	5
Non-metropolitan .....	71	74	12	90	50	10
Province .....	95	76	11	235	59	7

Note: See footnotes for Table 14-3.

Source: Dominion Bureau of Statistics, special tabulations.

#### *Rates at End of One Year Following Admission*

The over-all discharge rate had increased slightly in each province, from nearly 75 per cent at the end of four months to over 80 per cent. Relatively few additional discharges occurred between four months and one year. On the other hand, the cumulative death rate between four months and 12 months doubled in both provinces.

At the end of one year the discharge rate for functional psychoses had increased to about 90 per cent for British Columbia, but it still was lower in British Columbia than in Saskatchewan.

CUMULATIVE DISCHARGE RATE (ABSOLUTE), FOUR MONTHS  
SASKATCHEWAN AND BRITISH COLUMBIA, 1958-1960  
BY DIAGNOSTIC GROUP AND GEOGRAPHICAL AREA

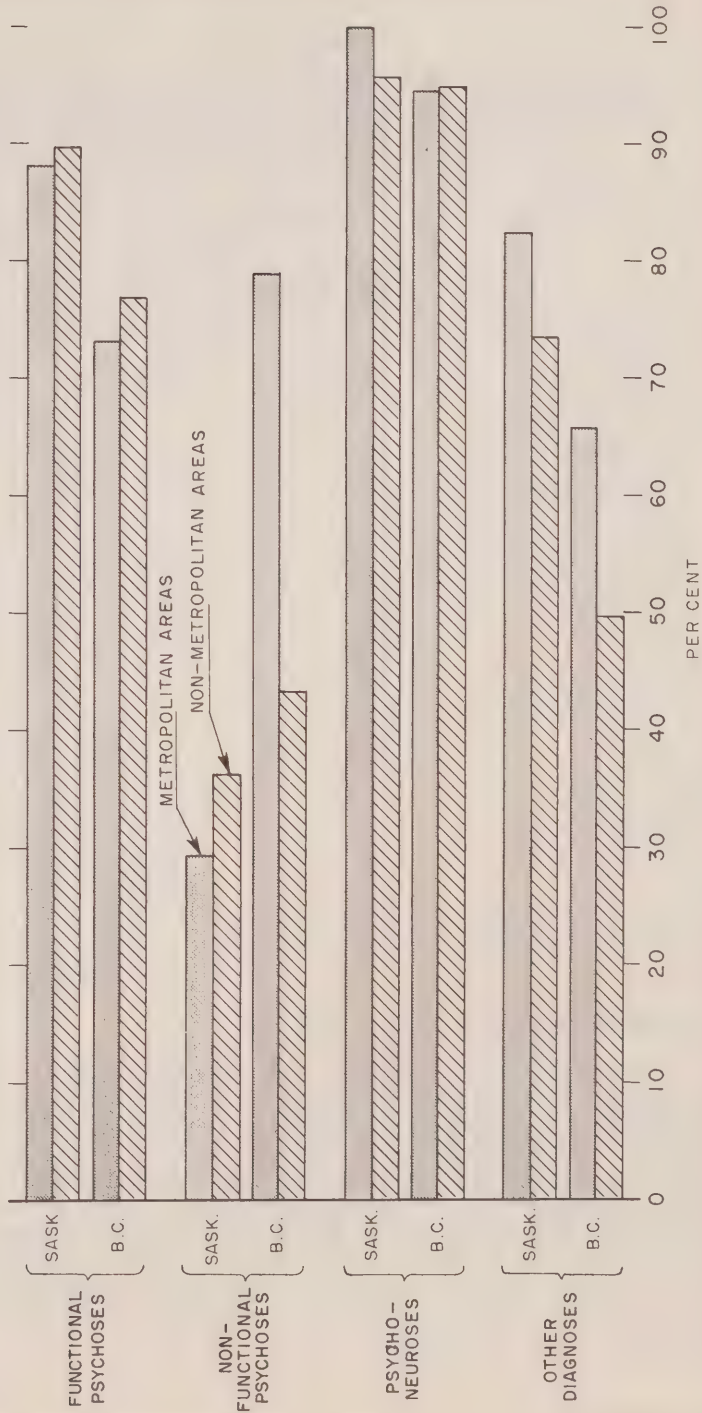


FIGURE 14-1

TABLE 14-5

CUMULATIVE RATES OF DISCHARGE, AND DEATH WITHIN ONE YEAR OF FIRST ADMISSION,<sup>1</sup> UNDUPLICATED 10 PER CENT SAMPLE OF FIRST ADMISSIONS TO ALL PSYCHIATRIC FACILITIES, BRITISH COLUMBIA AND SASKATCHEWAN, 1958-1960

	Saskatchewan			British Columbia		
	No. of Patients	Rates(Percentage)		No. of Patients	Rates (Percentage)	
		Discharge on Advice	Deaths		Discharge on Advice	Deaths
ALL DIAGNOSES						
Province	412	81	24	871	84	16
Functional psychoses						
Metropolitan	28	92	—	160	88	—
Non-metropolitan	91	99	3	73	90	—
Province	119	97	2	233	89	—
Non-functional psychoses						
Metropolitan	18	29	50	136	85	34
Non-metropolitan	87	46	48	53	53	44
Province	105	44	44	189	76	39
Psychoneuroses						
Metropolitan	29	100	—	128	98	3
Non-metropolitan	64	98	—	86	100	4
Province	93	98	—	214	99	4
Remaining Diagnoses						
Metropolitan	24	82	6	145	71	23
Non-metropolitan	71	74	12	90	58	10
Province	95	76	11	235	68	17

<sup>1</sup>See footnotes for Table 14-3.

Source: Dominion Bureau of Statistics, special tabulations.

## Longitudinal Studies of Patient Cohorts

In addition to disposition, and rates of discharge and death for the first hospital-event, patients were followed through transfers or subsequent readmissions. This patient movement is tabulated in Tables 14-6 and 14-7 and illustrated in Fig. 14-2. It is emphasized that there is a considerable amount of patient movement and inter-facility flow even within a period of three years. This subsequent patient movement must be considered in order to evaluate the overall results of hospital care beyond that occurring during the first hospital-event. In addition to rates of initial separation and readmission, indices reflecting the amount of hospital care over a period of time must be studied. Such an index, the utilization of hospital care for one or two years following first admission, is described in the next chapter.



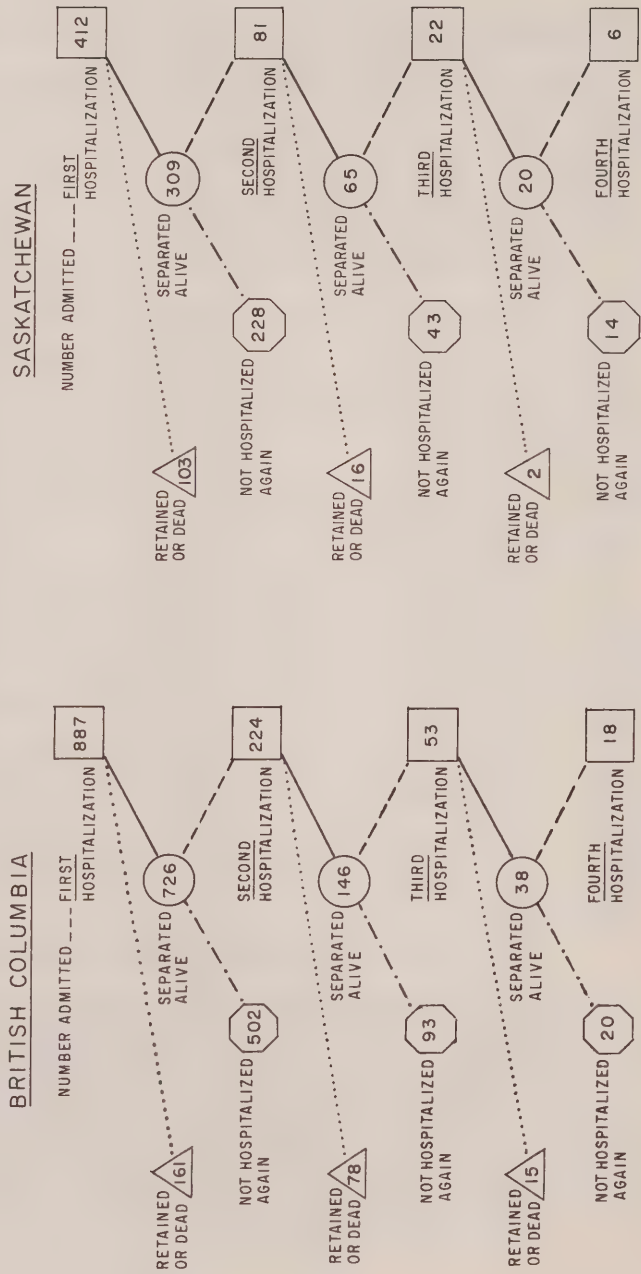
TABLE 14-6  
TABULATION OF PATIENT MOVEMENT BY DIAGNOSTIC GROUP, UNDUPLICATED 10 PER CENT SAMPLE  
OF FIRST ADMISSIONS, BRITISH COLUMBIA AND SASKATCHEWAN, 1958-1960

	All DIAGNOSES		Functional Psychoses		Non-functional Psychoses		Psycho- neuroses		Remaining Diagnoses	
	British Columbia	Sask. Sask.	British Columbia	Sask.	British Columbia	Sask.	British Columbia	Sask.	British Columbia	Sask.
<i>First Hospitalization</i>										
Number admitted <sup>1</sup> .....	887	412	233	119	189	105	214	93	251	95
Retained or dead <sup>2</sup> ...	161	103	25	9	40	67	13	1	83	26
Separated alive or transferred .....	726	309	208	110	149	38	201	92	168	69
Not hospitalized again ...	502	228	142	75	89	28	156	73	115	52
<i>Second Hospitalization</i>										
Number admitted <sup>1</sup> .....	224	81	66	35	60	10	45	19	53	17
Retained or dead <sup>2</sup> ...	78	16	12	5	32	4	7	2	27	5
Separated alive or transferred .....	146	65	54	30	28	6	38	17	26	12
Not hospitalized again ...	93	43	41	18	9	4	26	13	15	8
<i>Third Hospitalization</i>										
Number admitted <sup>1</sup> .....	53	22	13	12	17	2	12	4	11	4
Retained or dead <sup>2</sup> ...	15	2	6	-	6	1	-	1	3	-
Separated alive or transferred .....	38	20	7	12	11	1	12	3	8	4
Not hospitalized again ...	20	14	4	7	4	1	8	3	4	3
<i>Fourth Hospitalization</i>										
Number admitted .....	18	6	3	5	7	-	4	-	4	1

<sup>1</sup>Number admitted includes 16 non-residents of British Columbia.  
<sup>2</sup>Retained refers to those remaining under hospital care at Dec. 31, 1960.  
Source: Dominion Bureau of Statistics, special tabulations.

FIGURE 14-2

ILLUSTRATION OF PATIENT MOVEMENT, ALL DIAGNOSES, ALL FACILITIES  
UNDULICATED 10 PER CENT SAMPLE OF FIRST ADMISSIONS  
BRITISH COLUMBIA AND SASKATCHEWAN, 1958-1960



NOTE: Retained refers to those under hospital care at December 31, 1960.  
Separated alive includes transfers to other institutions and discharges against medical advice as well as authorized discharges.  
All events occurred between January 1, 1958 and December 31, 1960.

TABLE 14-7

TABULATION OF PATIENT MOVEMENT BY DURATION OF FIRST HOSPITAL STAY,<sup>1</sup>  
UNDUPLICATED 10 PER CENT SAMPLE OF FIRST ADMISSIONS,  
BRITISH COLUMBIA, 1958-1960

	Duration of First Hospital Stay				
	All	Under 1 Month	1-4 Months	4-12 Months	Over 1 Year
<b>First Hospitalization</b>					
Number admitted .....	887	389	346	88	64
Retained or dead.....	150	30	30	37	53
Separated alive or transferred.....	727	359	306	51	11
Not hospitalized again .....	505	236	223	36	10
<b>Second Hospitalization</b>					
Number admitted .....	222	123	83	15	1
Retained or dead.....	75	49	20	5	1
Separated alive or transferred.....	147	74	63	10	—
Not hospitalized again .....	93	44	44	5	—
<b>Third Hospitalization</b>					
Number admitted .....	54	30	19	5	—
Retained or dead.....	14	6	6	2	—
Separated alive or transferred.....	40	24	13	3	—
Not hospitalized again .....	22	12	7	3	—
<b>Fourth Hospitalization</b>					
Number admitted .....	18	12	6	—	—

<sup>1</sup>See footnote Table 14-3.

Source: Dominion Bureau of Statistics, special tabulations.

### Rates of Readmission from First Discharge

Rates of readmission were calculated for patients who had been discharged. The frequency of readmission within one year of discharge was similar in Saskatchewan (22 per cent) and British Columbia<sup>3</sup> (20 per cent). In each province, rates of readmission for patients discharged from psychiatric units were similar to those for patients discharged from psychiatric hospitals or mental hospitals.

Readmission rates were highest for functional psychoses with 27 per cent of discharges returning to hospital within one year in Saskatchewan and 24 per cent in British Columbia.

In Saskatchewan, readmission rates were higher for patients from metropolitan areas than non-metropolitan areas. In British Columbia higher readmission rates for patients from metropolitan areas occurred for patients originally admitted to psychiatric and mental hospitals, but not for those admitted to psychiatric units. Although the study population is small, it is evident that the one-year rates of readmission are not significantly different for patients discharged from psychiatric units than for patients discharged from psychiatric hospitals or mental hospitals in Saskatchewan or British Columbia.

<sup>3</sup>Readmission rates reported from other studies are summarized in Appendix 14-2.

**TABLE 14-8**  
**READMISSION RATE WITHIN ONE YEAR FOR PATIENTS DISCHARGED FROM FIRST ADMISSION,**  
**BY FACILITY FIRST ENTERED, DIAGNOSTIC GROUP AND GEOGRAPHIC AREA,**  
**UNDULICATED 10 PER CENT SAMPLE OF FIRST ADMISSION TO PSYCHIATRIC INSTITUTIONS, BRITISH COLUMBIA AND**  
**SASKATCHEWAN, 1958-1960**

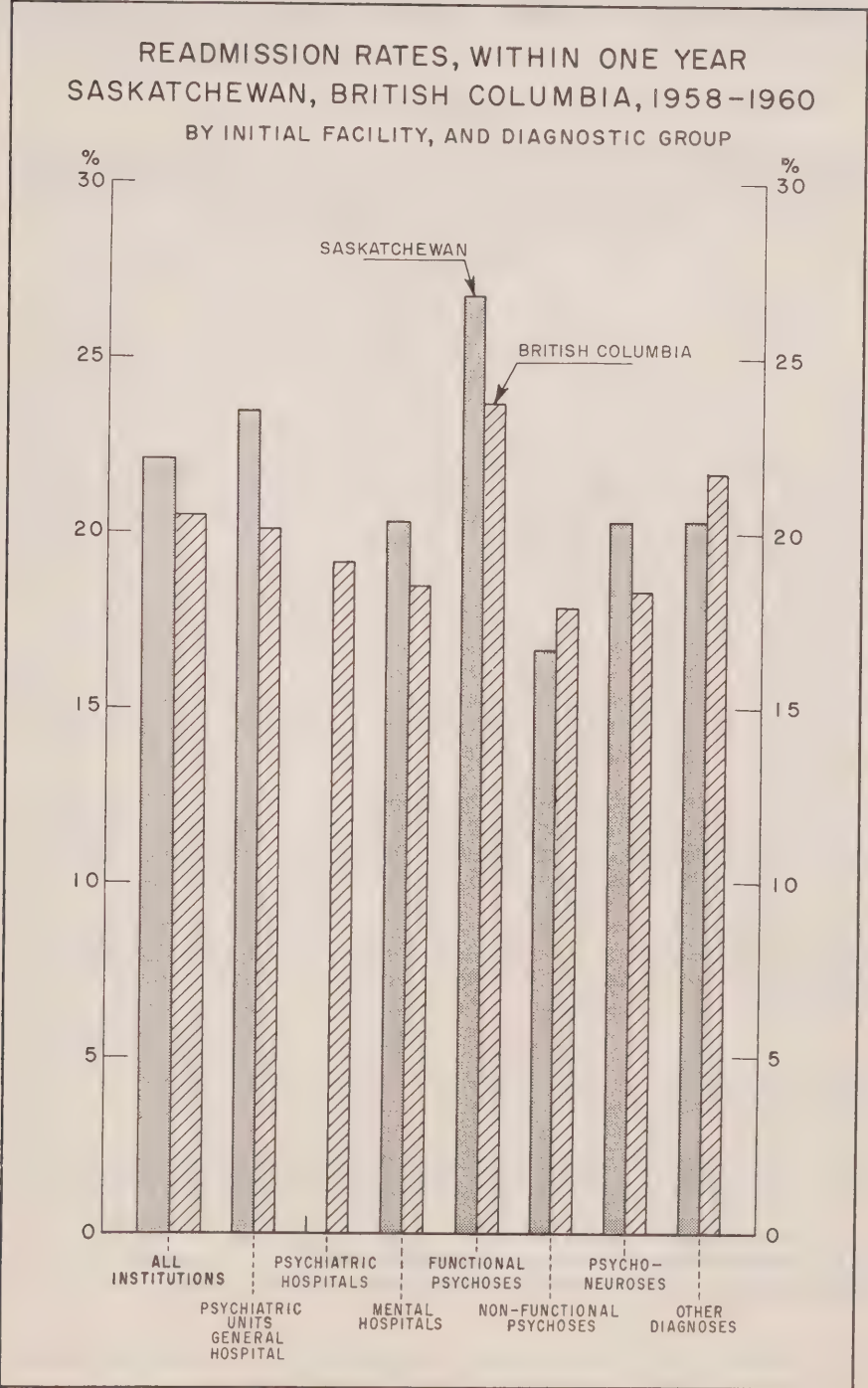
Group	Saskatchewan						British Columbia					
	Metropolitan			Non-metropolitan			Total			Metropolitan		
	No.	Rate (%)		No.	Rate (%)		No.	Rate (%)		No.	Rate (%)	
ALL PATIENTS.....	75	28		226	20		301	22		431	22	
<i>Facility</i>												
Psychiatric units .....	62	28		109	21		171	24		107	20	
Psychiatric hospitals .....	-	-		-	-		-	-		142	21	
Mental hospitals.....	13	25		113	20		126	20		85	21	
<i>Diagnostic Group</i>												
Functional psychoses.....	24	32		84	25		108	27		130	24	
Non-functional psychoses .....	4	-		30	16		34	17		95	17	
Psychoneuroses.....	29	32		63	17		92	20		115	24	
Remaining diagnoses.....	18	25		49	19		67	20		92	24	

No. refers to number of patients discharged during the study period and includes discharges against advice.

Source: Dominion Bureau of Statistics, special tabulations.



FIGURE 14-3



Rates of readmission for various age-sex groups varied more widely in the two provinces than did the rates for patients categorized by type of hospital or by diagnostic group.

TABLE 14-9

READMISSION RATE WITHIN ONE YEAR FOR PATIENTS DISCHARGED FROM FIRST ADMISSION, BY AGE GROUP AND SEX, UNDUPLICATED 10 PER CENT SAMPLE OF FIRST ADMISSIONS TO PSYCHIATRIC INSTITUTIONS, BRITISH COLUMBIA AND SASKATCHEWAN, 1958-1960

Age Group (years)	Saskatchewan				British Columbia			
	Male		Female		Male		Female	
	No.	Rate (%)	No.	Rate (%)	No.	Rate (%)	No.	Rate (%)
15 - 34 .....	38	20	42	28	82	23	102	20
35 - 44 .....	30	25	50	20	79	26	82	22
45 - 64 .....	36	17	53	25	106	22	97	11
65 + .....	33	25	17	..	39	11	41	22

Source: Dominion Bureau of Statistics, special tabulations.

## Conclusions

(i) Longitudinal studies of patients hospitalized at different times and in different institutions are feasible with appropriate processing of existing records. Such studies are essential and should be expanded.

(ii) One-third of admissions were discharged within one month, but there were marked diagnostic, demographic and geographic differences. Three-fourths of first admissions had been discharged within four months; relatively few discharges occurred between four and twelve months.

(iii) Discharge rates at the end of one and four months were higher for all diagnostic groups, except non-functional psychoses, in Saskatchewan, and in both provinces were higher for patients from metropolitan than non-metropolitan areas.

(iv) Functional psychoses had higher discharge rates than did all diagnoses combined. Saskatchewan consistently had higher discharge rates for functional psychoses than British Columbia.

(v) Death rates were highest for non-functional psychoses. In Saskatchewan one-third of psychoses of senium had died in hospital by the end of the first year.

(vi) One-fifth of discharges were readmitted within one year of leaving hospital. General hospital discharges did not have higher readmission rates than those from psychiatric or mental hospitals in either province.

## HOSPITAL UTILIZATION BY FIRST ADMISSIONS IN SASKATCHEWAN

### Introduction

The considerable amount of patient movement which occurred for first admissions was described in the previous chapter. In addition to considering rates of separation and rates of readmission, some index is needed which would include both of these factors in order to determine the amount of hospital care used by a group of persons over a period of time. The index used in this chapter is that of the total days of hospital care (accumulated in any Saskatchewan psychiatric facility in subsequent hospitalizations) during the one- or two-year period following first admission.<sup>1</sup> It was possible to calculate this ratio for patients from Saskatchewan because of the full co-operation of the Mental Health Division, Saskatchewan Department of Public Health.

### Disposition and Days of Hospital Care within One Year Following Admission

These data were derived by analyzing the hospital experience for individual patients during the one-year period after admission. That is, the hospital stays for a patient admitted on January 1, 1958, were tabulated for the period January 1, 1958, to December 31, 1958. For a patient admitted December 31, 1959, hospital stays were tabulated from December 31, 1959, to December 30, 1960.

For the sample of 265 patients admitted to Saskatchewan psychiatric institutions during 1958 and 1959 there were 26,589 days of hospital care utilized during the first year subsequent to date of admission, a mean of 100 days of hospital care per admission.

These 265 patients had 318 hospital-events during the first year subsequent to admission. A hospital-event included transfers as well as readmissions. At the end of one year nearly three-fourths of the patients were out of hospital, one-tenth had died, and one-sixth remained in hospital. Those patients remaining in hospital at the end of the year may not have been continuously retained.

Nine-tenths of functional psychoses were out of hospital at the end of the year, and an average of 84 days of hospital care per admission had been utilized. Less than one-quarter of the total days of care during the first year were utilized by functional psychoses.

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<sup>1</sup>This measure resembles the Total Length of Stay Index described by Mueller, F.C., and Tripodi, T., The use of several methods of follow-up analysis with one cohort, *Am. J. publ. Hlth.* 51:1163-1173, 1961.

Non-functional psychoses (mainly psychoses of the senium) used 44 per cent of the total hospital days, and had an average of 171 days of hospital care per patient during the first year. One-third of non-functional psychoses remained in hospital at the end of the year, one-third were out of hospital and one-third had died in hospital.

TABLE 15-1

DISPOSITION AND AGGREGATE DAYS OF HOSPITAL CARE AT THE END OF ONE YEAR AFTER ADMISSION, BY DIAGNOSTIC GROUP, UNDUPLICATED 10 PER CENT SAMPLE OF SASKATCHEWAN FIRST ADMISSIONS, 1958 AND 1959

Diagnostic Group	Number		Disposition of Patients at End of 1 Year						Aggregate Days of Hospital Care	
	Individual Patients	Events	In Hospital		Out of Hospital		Died in Hospital		Total No.	Per Patient
	No. %		No. %		No. %		No. %		%	
ALL DIAGNOSES...	265 = 100	318	43	16	195	74	27	10	26,589	100.3
Functional psychoses .....	73 = 100	94	6	8	66	90	1	1	6,154	84.3
Non-functional psychoses .....	68 = 100	74	22	32	24	35	22	32	11,648	171.3
Psychoneuroses ....	62 = 100	77	2	3	59	95	1	2	2,529	40.8
Remaining diagnoses.....	62 = 100	73	13	21	46	74	3	5	6,258	100.9

### Disposition and Days of Hospital Care within Two Years Following Admission

This describes the hospital experience during the two-year period subsequent to admission in 1958. There were 123 patients who had 160 hospital-events during the two years after first admission. At the end of two years one-fifth were in hospital, one-tenth had died in hospital and seven-tenths were out of hospital.

The mean time spent by patients in hospital during the two-year period was 173 days. For patients with functional psychoses the mean was 90 days of hospital care. This was slightly higher than the first year mean of 84 days.

Patients with non-functional psychoses used a mean of 330 days of hospital care and patients with remaining diagnoses used an average of 209 days. These two groups included psychoses of the senium, and patients with mental retardation respectively.

### Patients with Continuous Hospitalization

Of the 265 patients admitted during 1958-1959, 37 (14 per cent) used one-half of the total hospital time during the first year. Of these 37 patients 33 were diagnosed as either psychoses of the senium or mental retardation.



FIGURE 15-1

DISPOSITION AND DAYS OF HOSPITAL CARE WITHIN ONE YEAR  
OF FIRST ADMISSION, SASKATCHEWAN SAMPLE, 1958-1959

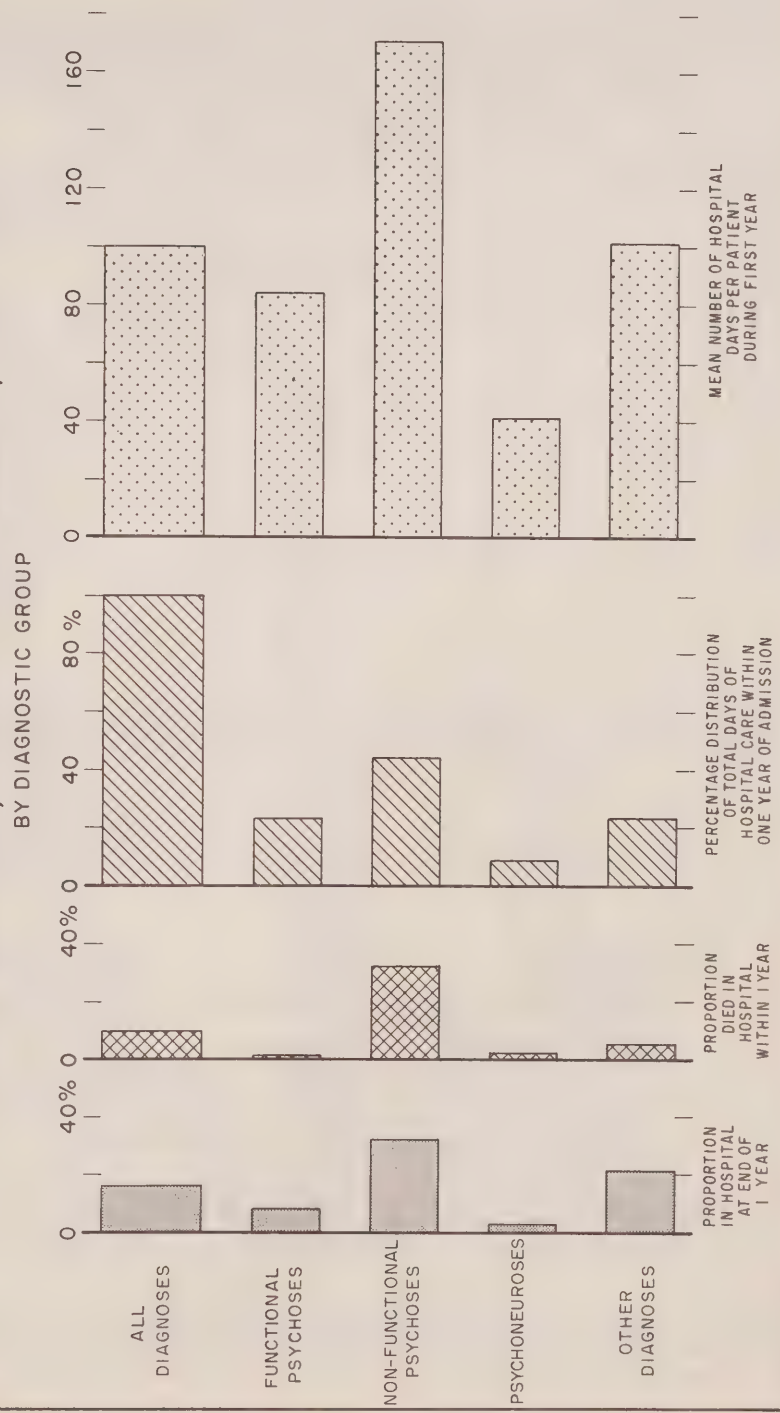


FIGURE 15-2

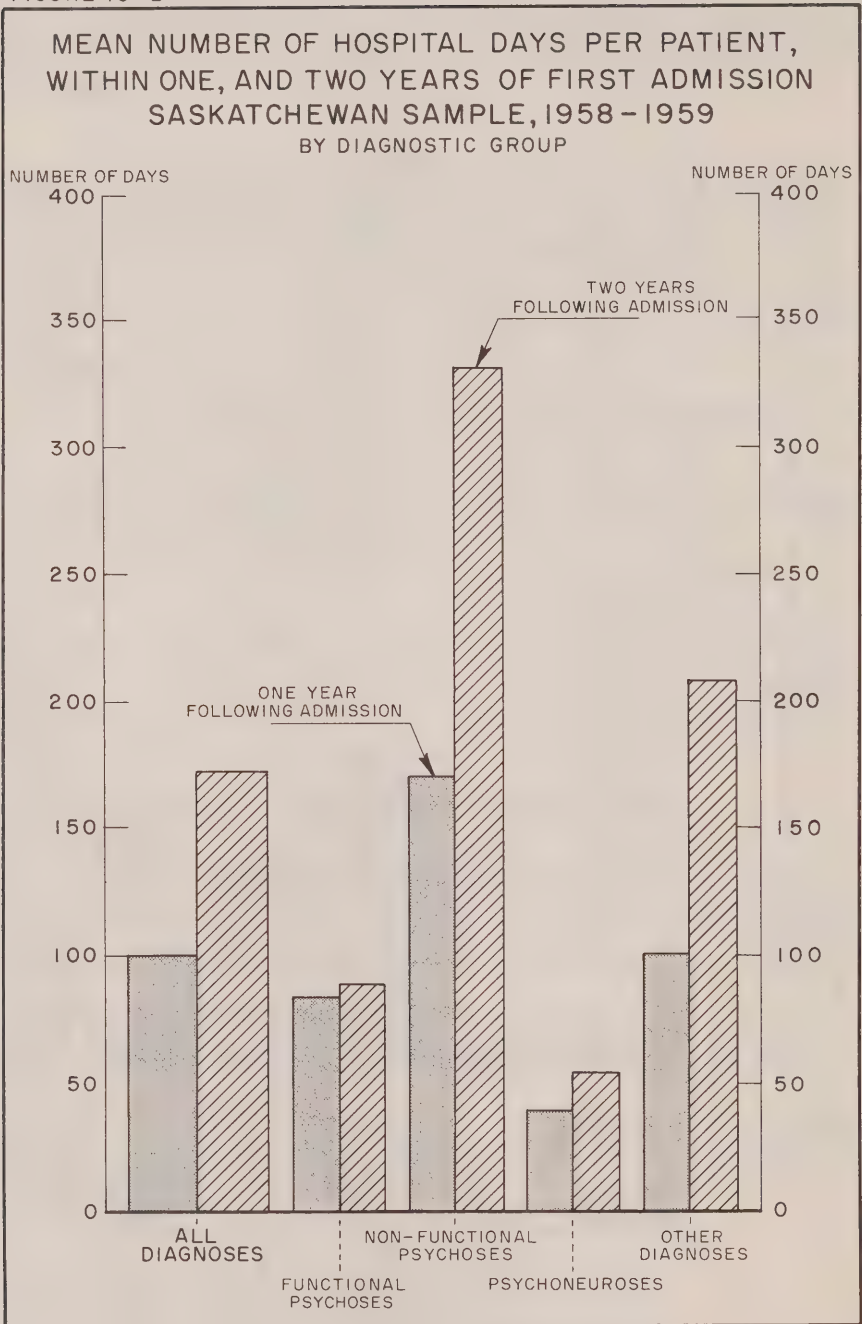


TABLE 15-2  
DISPOSITION AND AGGREGATE DAYS OF HOSPITAL CARE AT END OF TWO YEARS  
AFTER ADMISSION, BY DIAGNOSTIC GROUP, UNDUPLICATED 10 PER CENT  
SAMPLE OF SASKATCHEWAN FIRST ADMISSIONS, 1958

Diagnostic Group	Number			Disposition of Patients at End of 2 Years						Aggregate Days of Hospital Care		
	Individual Patients		Events	In Hospital		Out of Hospital		Died in Hospital		Total		Per Pa- tient:
	No.	%		No.	%	No.	%	No.	%	No.	%	
ALL DIAGNOSES...	123	100	160	24	20	88	72	11	9	21,273	100	172.9
Functional psychoses	37	100	57	4	11	32	86	1	3	3,320	16	89.7
Non-functional psychoses .....	33	100	41	13	39	10	30	10	30	10,891	51	330.0
Psychoneuroses ....	26	100	29	—	—	26	100	—		1,428	7	54.9
Remaining diagnoses	27	100	33	7	26	20	74	—		5,634	26	208.7

TABLE 15-3  
CONTRIBUTION OF PATIENTS WITH CONTINUOUS HOSPITALIZATION TO HOSPITAL  
UTILIZATION WITHIN ONE YEAR FOLLOWING ADMISSION, UNDUPLICATED  
10 PER CENT SAMPLE OF FIRST ADMISSIONS, SASKATCHEWAN, 1958-1959

265 patients with 26,589 days of hospital care during first year after admission

37 patients with continuous hospitalization during first year used 13,505 hospital days

	Number of patients
Functional psychoses .....	3
Non-functional psychoses (psychoses of senium).....	20
Psychoneuroses .....	1
Mental retardation .....	13

Among the 123 patients first admitted in 1958 and followed for a two-year period 20 patients remained continuously hospitalized for one year; of these, 19 (95 per cent) remained continuously hospitalized to the end of two years.

There were 11 patients with psychoses of the senium, and seven with mental retardation who were continuously hospitalized, and used more hospital days (13,140) than the remaining 105 patients (8,133 hospital days) during the two-year period.

### Utilization by Type of Institution First Entered

During 1958-59 there were 117 patients admitted to psychiatric units who had 151 hospital-events during the first year subsequent to admission. Of the 117 patients, one patient (with psychosis of the senium) was continuously hospitalized during the first year, being transferred to a mental hospital. A total of 11 patients were also hospitalized in mental hospitals at some time during the one-year period. Five of the 34 patients with functional psychoses were hospitalized in a mental hospital for a total of 417 days, but none remained hospitalized at the end of the year.

TABLE 15-4

AGGREGATE DAYS OF CARE DURING THE FIRST YEAR FOR PATIENTS ENTERING PSYCHIATRIC UNITS, UNDUPLICATED 10 PER CENT SAMPLE OF FIRST ADMISSIONS, SASKATCHEWAN, 1958-1959

Diagnostic Group	Number Individuals	No. Hospital Events	No. Individuals Hospitalized in Mental Hospital	Days of Care	
				Psychiatric Unit	Mental Hospital
ALL DIAGNOSES.....	117	151	11	3,530	1,185
Functional psychoses .....	34	48	5	1,426	417
Non-functional psychoses ...	11	15	3 <sup>1</sup>	281	647 <sup>1</sup>
Psychoneuroses .....	45	55	1	1,326	34
Remaining diagnoses .....	27	33	2	497	87

<sup>1</sup> One patient hospitalized continuously during first year.

In comparison to a mean of 54 hospital days utilized by patients with functional psychoses admitted to psychiatric units, the 39 patients first admitted to mental hospitals spent 111 days in hospital during the year. Six of the patients (15 per cent) with functional psychoses first admitted to mental hospital were in hospital at the end of the first year.<sup>2</sup> Any comparison of the costs of care in the two types of hospital must include the projected future costs of any patients remaining in hospital at the end of the study period.

<sup>2</sup>It is difficult to compare these utilization data for selected patients with the experimental results reported by Smith, C. M., *et al.*, where unselected groups of comparable patients committed in Saskatoon were randomly admitted to either a psychiatric unit or a mental hospital. These Saskatoon patients included readmissions, and diagnostic and age distributions which varied from the Saskatchewan sample reported above. Smith, *et al.*, conclude that chronicity may be reduced by active community programs, that evaluation is needed, and that the challenge of long stay patients "... can best be met by retaining both chronic and acute patients within the framework of the general hospital". Smith, C. M., McKerracher, D. G., and Demay, M., A follow-up study of comparable mental and general hospital patients, *Canad. psychiat. Ass. J.* 9:155-163, 1964.



TABLE 15-5

AGGREGATE DAYS OF CARE DURING ONE AND TWO YEARS FOLLOWING ADMISSION, BY DIAGNOSTIC GROUP, AND TYPE OF FACILITY FIRST ENTERED, UNDUPLICATED  
10 PER CENT SAMPLE OF SASKATCHEWAN FIRST ADMISSIONS, 1958-1959

Diagnostic Group	Aggregate Days of Care: Patient First Admitted to				Days of Care per 100 Patients: Patient First Admitted to		
	Mental Hospital		Psychiatric Unit		Mental Hos- pital	Psychi- atric Unit	All Saskat- chewan Facili- ties Com- bined <sup>1</sup>
	No. Pa- tients	Aggreg. Days Care	No. Pa- tients	Aggreg. Days Care			
<i>One year following first admission</i>							
All Diagnoses.....	140	19,552	117	4,715	13,966	4,030	10,034
Functional psychoses.....	39	4,311	34	1,843	11,054	5,421	8,430
Non-functional psychoses .	57	10,720	11	928	18,807	8,436	17,129
Psychoneuroses.....	17	1,169	45	1,360	6,876	3,022	4,079
Remaining diagnoses .....	27	3,352	27	584	12,415	2,163	10,094
<i>Two years following first admission</i>							
All Diagnoses.....	61	14,216	56	3,382	23,304	6,039	17,295
Functional psychoses.....	20	2,250	17	1,070	11,250	6,294	8,973
Non-functional psychoses .	26	9,490	7	1,401	36,500	20,014	33,003
Psychoneuroses.....	7	836	19	592	11,943	3,116	5,492
Remaining diagnoses .....	8	1,640	13	319	20,500	2,454	20,867

1 Includes hospital for mentally retarded.

This utilization for Saskatchewan can be compared with the experience of first admissions to mental hospitals in England and Wales during 1954 and 1955 (see Appendix 15-1). For patients with functional psychoses a mean of 174 hospital days were used in the two years following first admission in England and Wales in comparison to 112 days for those entering Saskatchewan mental hospitals.

### Overview of Utilization

For all patients the first admission rate was 154 per 100,000; 81 per cent of patients were discharged within one year, and 22 per cent of discharges were readmitted within one year. A mean of 100 hospital days per patient were spent in all institutions during the first year, and 173 days during the first two years following admission.

Functional psychoses had an admission rate of 67 per 100,000, a discharge rate of 89 per cent within four months, and a readmission rate for discharges of 27 per cent within one year. Functional psychoses utilized 16 per cent of the hospital care within the two years following first admission.

Non-functional psychoses formed one-fourth of the admissions, had a high death rate, and used one-half of the hospital days within the two years following first admission.

FIGURE 15-3

ILLUSTRATION OF PATIENT MOVEMENT BY TYPE OF FACILITY  
UNDUPLICATED 10 PER CENT SAMPLE OF FIRST ADMISSIONS  
SASKATCHEWAN, 1958-1960

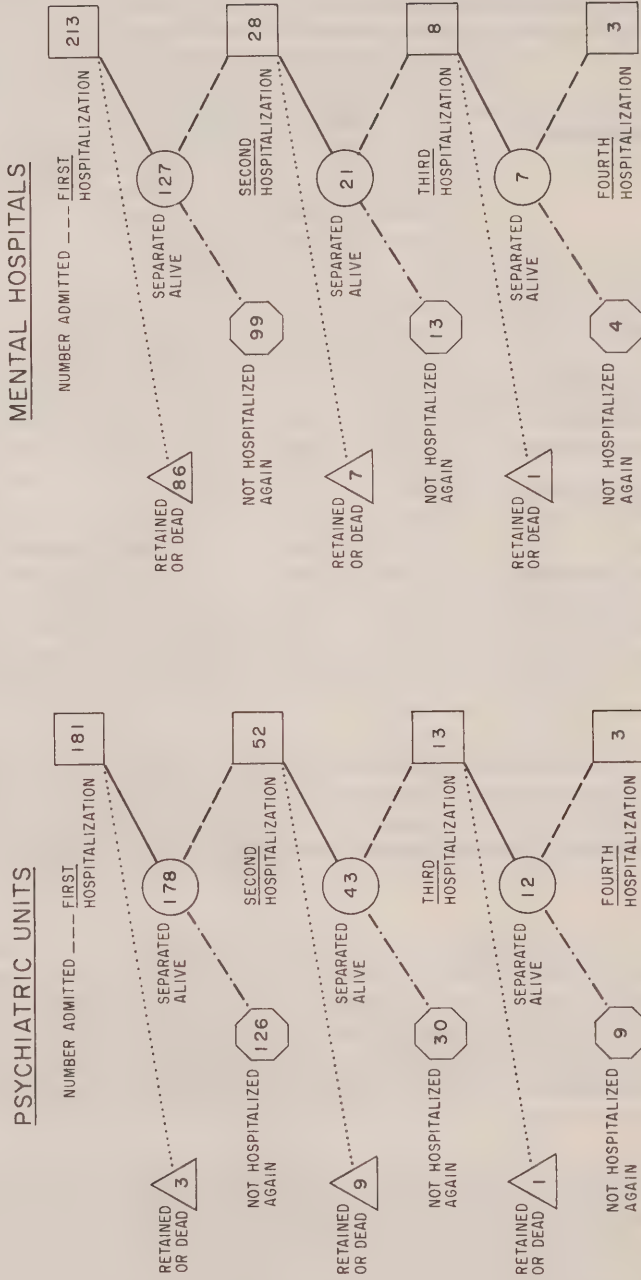


TABLE 15-6  
ESTIMATES OF PATIENT MOVEMENT AND HOSPITAL UTILIZATION, UNDUPLICATED  
10 PER CENT SAMPLE OF FIRST ADMISSIONS TO ALL PSYCHIATRIC INSTITUTIONS,  
SASKATCHEWAN, 1958-1960

	First Admission Rate per 100,000		Percentage Discharged			Per- centage of Discharges Readmitted in 1 Year	Aggregate Days of Hospital Care per Patient		Percentage Distribution of Hospital Days	
			1 Month	4 Months	12 Months		in first Year	in first 2 Years	in first Year	in first 2 Years
	Ages 15-64	All Ages								
ALL DIAGNOSES . . . . .	181	154	36	76	81	22	100	173	100	100
Functional psychoses . . . . .	67	45	31	89	97	27	84	90	23	16
Non-functional psychoses . . . . .	10	39	14	35	44	17	171	330	44	51
Psychoneuroses . . . . .	54	34	58	97	98	20	41	55	10	7
Remaining diagnoses . . . . .	50	37	42	76	76	20	101	209	24	26

## Conclusions

(i) Hospital use, defined in terms of aggregate time spent in psychiatric institutions over a one- or two-year period, is an essential index for evaluating bed requirements. This index can be derived from existing records.

(ii) In Saskatchewan during the first year after admission, 265 patients had an average of 1.2 admission-events, and used a mean of 100 hospital days per patient. At the end of one year three-fourths of patients were out of hospital, one-tenth had died in hospital, and one-sixth were in hospital.

Continuous hospitalization was incurred by 14 per cent ( $N=37$ ) of the patients, who used one-half of the hospital days. Patients with psychoses of the senium and mental retardation made up nine-tenths of those continuously hospitalized.

(iii) Patients with functional psychoses used one-fourth of the hospital days and averaged 84 days in hospital within the first year after admission. Among patients with non-functional psychoses one-third, respectively, were in hospital, dead, or out of hospital at the end of one year.

(iv) By the end of two years, an average of 173 days per patient had been used over-all, 90 days for patients with functional psychoses, and 330 days for patients with non-functional psychoses. Three-fifths of the aggregate hospital days had been used by one-seventh of the patients, who had been continuously hospitalized with mental retardation or non-functional psychoses.

(v) General hospital admissions with functional psychoses used a mean of 54 hospital days, and functional psychoses admitted to mental hospitals used an average of 111 days during the first year. None of the general hospital admissions with functional psychoses remained in any hospital at the end of the first year, while 15 per cent of the functional psychoses admitted to mental hospital were hospitalized.



PART IV

PSYCHIATRIC CARE AND PREPAID MEDICAL  
INSURANCE PLANS



## INSURANCE FOR PSYCHIATRIC CARE IN CANADA

"...it is possible to foresee that at some time or other the conscience of society will awake and remind it that the poor man should have just as much right to assistance for his mind as he now has to the life-saving help offered by surgery; and that the neuroses threaten public health no less than tuberculosis, and can be left as little as the latter to the impotent care of individual members of the community."<sup>1</sup>

### Introduction to Psychiatric Care and Insurance Plans

Insurance for the hospital care of psychiatric illness is not a recent innovation. A form of prepayment with co-insurance existed in the "subscription-asylums" of England in the early 1800's. Persons contributing to the asylums could nominate patients for admission at reduced rates.<sup>2</sup>

In Canada, in recent years, more patients have been receiving psychiatric treatment outside of provincially operated institutions. This increase is due to the extension of psychiatric divisions in general hospitals, and to the increasing number of psychiatrists practising in the community, both in public clinics and private practice.

The National Hospital Insurance programme provides insured services in "hospitals listed in one of the schedules to the agreement with the federal government. The federal legislation does not contain a precise definition of a hospital but it prescribes a hospital to mean a facility providing in-patient and out-patient services, excluding...hospitals or institutions for the mentally ill...

"In-patient services are provided in listed hospitals as insured services regardless of the individual diagnosis of the insured person. Thus, for example, the services provided in the psychiatric ward of a listed general hospital are insured services despite the fact that institutions for the mentally ill as such are excluded from the federal law."<sup>3</sup>

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<sup>1</sup>Freud, S., Lines of advance in psycho-analytic therapy. Translated by James Strachey in *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, Vol. XVII, London: The Hogarth Press, 1955, pp. 116-167.

<sup>2</sup>Jones, Kathleen, *Lunacy, Law and Conscience 1744-1845*, London: Routledge and Kegan Paul Limited, 1954.

<sup>3</sup>Department of National Health and Welfare, Information Services Division, *The Hospital Insurance and Diagnostic Services Program in Canada*, Ottawa: Queen's Printer, 1962, p. 38.

In Ontario and Prince Edward Island, mental hospitals are included in the provincial Hospital Insurance Program only.<sup>4</sup> Electro-shock therapy is provided as an insured out-patient service in Manitoba.<sup>5</sup>

Non-governmental insurance plans generally exclude the costs of hospital and physician care for patients in provincially operated psychiatric institutions. During 1960 public mental hospitals reported receiving \$340 thousand from private insurance plans, and over \$86 million from other sources.<sup>6</sup>

Similarly there are major limitations, exclusions and restrictions on payments by medical insurance plans for the services of private psychiatrists. Some of the reasons suggested for this general lack of comprehensive prepaid care for psychiatric illnesses include discrimination, prejudice, apathy and ignorance regarding psychiatric illnesses.<sup>7</sup>

In the United States, many commercial companies provide major medical insurance including coverage for mental conditions<sup>8</sup> but on a more restrictive basis than for physical conditions.<sup>9</sup> "Experiments" in providing short-term ambulatory care by private psychiatrists have been financed by the National Institute of Mental Health.<sup>10</sup>

One of the important reasons for variation among insurance plans is the lack of experience and data upon which to estimate the utilization, duration and costs of psychiatrists' services.<sup>11,12</sup> It has been inferred that psychiatric treatment is interminable:

"Serious problems have arisen when we have attempted to incorporate benefits for specialist psychotherapy into Prepaid Insurance. These problems stem from the continuing nature of the treatment in that it is often not as self-limiting in extent as the treatment of physical illness. Also the symptoms are more subjective than objective, and therefore more liable to be initiated and continued by the patient rather than the doctor."<sup>13</sup>

<sup>4</sup>*Ibid.*, p. 52.

<sup>5</sup>*Ibid.*, p. 13.

<sup>6</sup>Dominion Bureau of Statistics, *Mental Health Statistics, Financial Supplement, 1960, op. cit.*, p. 7.

<sup>7</sup>McKerracher, D. G., Modern psychiatry and the health plans, *New Engl. J. Med.* 260:474-478, 1959.

<sup>8</sup>Health Insurance Institute, *Group Health Insurance policies issued in 1961; 1962; 1963*; New York: Health Insurance Institute, 1962, 1963, 1964.

<sup>9</sup>Joint Information Service of the American Psychiatric Association and the National Association for Mental Health, *Insurance Coverage for Mental Illness, A Special Report*, Washington: American Psychiatric Association, Nov. 1962.

<sup>10</sup>Avnet, Helen H., *Psychiatric Insurance*, New York: Group Health Insurance, Inc., 1962. Benefits during July, 1959-Dec., 1961 included up to 15 individual office visits at the rate of \$15.00, in addition to \$5.00 per visit from the patient.

<sup>11</sup>Richman, A., and Bezeredi, T., Health insurance prepayment for psychotherapy in private psychiatric practice, *Canad. Psychiat. Ass. J.* 8:121-132, 1963.

<sup>12</sup>Follman, J. F., Jr., (Health Insurance Association of America), The Present Status of Insurance Coverages for the Treatment of Mental Illnesses, presented before the Northeast State Governments' Conference on Mental Health, Albany, April 1963.

<sup>13</sup>Canadian Medical Association, British Columbia Division, brief submitted to the Royal Commission on Health Services, Vancouver, February 1962.



Another factor involves the discrepancy between the estimated high proportion of the population with psychiatric symptoms and illnesses, the as yet unknown proportion of the population with psychiatric illnesses requiring treatment, and the limited supply of psychiatrists.

Finally the need for extensive changes in the organization of psychiatric services has been emphasized.

"It is hard to believe that effective coverage will ever prove practical unless accompanied by rather extensive changes in the organization of psychiatric services and its maximum integration with general medical care."<sup>14</sup>

"Further development or progress in the provision of private health insurance protection against the costs of care for mental illness requires... that 'psychiatry establish patterns of care that are acceptable to, understood by, and demanded by the public'."<sup>15</sup>

### Prepaid Psychiatric Care in Canada

Periodic reviews on the extent of Canadian prepayment for psychiatrists' care have been made by Griffin.<sup>16</sup> In 1957, subscribers of Medical Services Association, Vancouver, became eligible for up to 15 hours of psychotherapy; in 1958, Medical Services (Alberta) Inc., began paying up to \$200 per course of psychotherapy; and in 1962 Manitoba Medical Services began covering all psychiatrists' services without limiting the amount or duration of scheduled benefits.

Canada has been conducting some scattered "experiments of nature" involving insurance for treatment of psychiatric illnesses, and the remainder of Part IV describes the actuarial experience of some of these plans.

#### *Trans-Canada Medical Plans and Psychiatric Care*

Trans-Canada Medical Plans (T.C.M.P.) is the national organization of eleven Canadian prepaid medical care plans which are sponsored or approved by the medical profession. At the end of 1961, there were 3.2 million Canadians enrolled in T.C.M.P. programmes offering comprehensive coverage.<sup>17</sup> T.C.M.P. has described the emphasis by their members on providing coverage for *all medical needs*, and the steady progress in extending coverage for psychiatric treatment.

#### *"Emphasis on Coverage for all Medical Needs"*

"All member plans of T.C.M.P. provide benefits which include services of a doctor in the home and office as well as in the hospital and cover a broad range of preventive, diagnostic and curative services where and as required. Preventive services include prenatal and post-natal care, care of the pre-school child, inoculations and vaccinations and promotion of adult health, including a general systematic approach to the

<sup>14</sup>Somers, H. M., and Somers, Anne R., *Doctors, Patients, and Health Insurance*, Washington: The Brookings Institution, 1961, p. 391.

<sup>15</sup>Follman, J. F., Jr., *op. cit.*

<sup>16</sup>Griffin, J. D., Report on hospital and medical insurance plans, *Canad. Psychiat. Ass. J.* 5:234-237, 1960.

<sup>17</sup>Comprehensive coverage programmes are generally considered to be those which provide coverage for physicians' services in the home, office and hospital..." Trans-Canada Medical Plans, brief submitted to the Royal Commission on Health Services, Toronto, May 1962. App. C. T.C.M.P. Manual of Insurance Terms for health insurance purposes, p. 3.

early detection of disease, such as heart or cancer conditions. As referred to in paragraph 74, there are minor variations in degree in these matters.

"In all areas of the country, medical services are provided by general practitioners and by specialists in many fields. In all areas where service plans operate the public has direct access to general practitioners with services of specialists available for first visit or referred consultations, for all referred work or, in the case of some plans, on the same direct access basis as general practitioners.

"As well as providing broad coverage for the treatment of physical illness, the extension of coverage into the treatment of mental conditions has steadily progressed as experience has been developed. The new knowledge of recent years in respect to mental health and treatment methods has resulted in a rapid movement away from public misconceptions and myths which at one time stood in the way of the rehabilitation of persons suffering from mental illness. The increasing view that mental ailments should be regarded in the same light as physical ailments and treated by medical practitioners in private practice is resulting, to an increasing degree, in such care coming under the prepayment mechanism of the T.C.M.P. plans."<sup>18</sup>

During 1958 to 1960 nearly one-half of T.C.M.P.'s comprehensive coverage programmes did not pay for psychiatrists' treatment. Among the programmes paying for psychiatric care in 1958 the amounts paid ranged from 8¢ to 23¢ per member per year and from 0.3 per cent to 1.1 per cent of the total costs for these particular plans. By 1960 the costs of psychiatric care ranged from 10¢ to 50¢ per member-year, and from 0.4 per cent to 1.7 per cent of the total costs.

TABLE 16-1

TRANS-CANADA MEDICAL PLANS, COMPREHENSIVE COVERAGE PROGRAMS  
1958 - 1960, COST OF PHYSICIANS' SERVICES PER PERSON PER ANNUM  
BASED UPON ACTUAL AMOUNTS PAID TO DOCTORS FOR SERVICES PROVIDED,  
COST OF PSYCHIATRISTS' TREATMENT PER MEMBER, AND PERCENTAGE  
OF TOTAL COSTS

	Total Medical			Psychiatrist's Treatment					
	Costs per Member			Cost per Member			Percentage of Total Costs		
	1958	1959	1960	1958	1959	1960	1958	1959	1960
Plan A	\$25.00	\$28.13	\$29.37	\$0.23	\$0.32	\$0.37	0.9	1.0	1.3
B	20.64	22.48	24.84	0.23	0.24	0.26	1.1	1.1	1.1
C	19.53	19.52	20.51	—	—	—	—	—	—
D	20.90	20.96	21.44	—	—	—	—	—	—
E	25.55	24.68	27.88	—	—	—	—	—	—
F	23.23	24.65	26.38	0.13	0.14	0.18	0.5	0.7	0.7
G	22.59	23.23	24.14	0.08	0.09	0.10	0.3	0.3	0.4
H	—	30.66	29.14	—	0.50	0.50	—	1.7	1.7
I	18.33	19.97	—	0.13	0.28	—	0.6	1.3	—
K	—	14.08	17.21	—	—	—	—	—	—
L	—	—	16.71	—	—	—	—	—	—

—No amount listed in tabulations.

Source: Data derived from tabulations provided to the Royal Commission on Health Services by Trans Canada Medical Plans, 1962.

<sup>18</sup>*Ibid.*, paras. 82-84, p. 25.

The relation of the costs for psychiatrists' care to the cost for other types of physicians' care has been analyzed for T.C.M.P. comprehensive coverage plans for 1960. Total expenditures ranged from \$20.51 to \$29.37 per member-year. Part of this variation is due to differences in fee schedules and proration. Surgical care averaged \$6.15 and ranged relatively little from \$5.75 to \$6.64 per member per year. Office calls averaged \$7.09, and ranged from \$5.21 to \$8.86. In comparison, the costs of psychiatrists' treatment averaged 25¢ per person per year in the six plans paying for such care.

TABLE 16-2

NINE T.C.M.P. PLANS WITH COMPREHENSIVE COVERAGE - ABSOLUTE AMOUNTS  
COST OF PHYSICIANS' SERVICES BY TYPE - PER PERSON PER ANNUM, 1960

Type of Service	Plan A	Plan B	Plan C	Plan D	Plan E	Plan F	Plan G	Plan H	Plan I	All Plans Incl.
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
I Surgical care . . . .	6.64	5.93	5.96	5.95	6.44	5.75	6.35	6.46	5.90	6.15
II Obstetrical care . .	2.12	2.08	1.98	2.22	1.72	2.21	1.92	2.05	1.46	1.97
III Medical care:										
A Home calls . . . .	2.45	1.88	1.28	1.28	1.81	2.76	1.98	2.32	3.66	2.16
B Office calls . . . .	8.75	7.19	5.21	5.79	8.09	7.34	6.84	8.86	5.34	7.05
C Hospital calls . .	1.80	1.73	1.85	1.52	1.35	1.62	1.22	1.42	.99	1.50
D Consultations . .	1.36	.80	.48	.44	.46	1.66	.98	1.20	1.08	.94
E Allergy testing and treatment . .	.25	.20	.04	.07	.14	.08	.03	.22	.13	.13
F Psychiatric Treatment . . . . .	.37	.26	-	-	-	.18	.10	.50	.10	.25
G Special proce- dures diag. & therap. . . . .	.65	.34	.34	.31	2.01	.76	.81	.74	1.63	.84
H Other non-listed items of med. care . . . . .	.28	.14	.21	.02	.29	.80	.79	1.88	.52	.40
IV Other relat. services										
A Radiology . . . . .	2.39	2.29	1.39	1.81	3.41	1.60	1.61	1.38	.03	1.77
B Pathology . . . . .	.74	.62	.61	.76	1.13	.09	.03	.63	.08	.52
C Anesthesia . . . .	1.57	1.39	1.03	.99	1.03	1.44	1.48	1.47	.98	1.26
V Other items . . . .	-	-	.13	.28	-	.09	-	-	.10	-
Total . . . . .	29.37	24.84	20.51	21.44	27.88	26.38	24.14	29.14	22.00	-

Source: Trans-Canada Medical Plans, brief submitted to the Royal Commission on Health Services, Toronto, May 1962, Exhibit X.

*Administrative Policies of Trans-Canada Medical Plans Regarding Payment for Psychiatric Services, Dec. 1962*

In 1960, the policy of Medical Services (Alberta) Inc., was stated as providing preventive, diagnostic and therapeutic care for patients with psychiatric



illnesses and "*..attempting to keep as many patients as possible out of Provincial Mental Hospital and on private payment basis*". In general, most members of T.C.M.P. in 1962 were more restrictive in their policies and benefits for the treatment of psychiatric illnesses.

In a report on payment for psychiatric services, prepared by the office of T.C.M.P., there were wide-spread and major differences evident in the extent, duration and amount of psychiatrists' care provided by the member-plans (Appendix 16-1).

Although all of the medical service plans provided payment for consultation, there was wide variation in coverage for continuing treatment. In Alberta, members of MS(A)I could have up to \$1,000 per contract-year paid for psychiatrists' services. Members of M.M.S. in Manitoba were covered for "all psychiatric services unless they were available to the subscribers without charge."<sup>19</sup> British Columbia members of M.S.A. and M.S.I. could have up to 15 hours of psychotherapy *in a lifetime* paid by the Plan. Ontario members of P.S.I. were eligible for up to two services for continuing psychotherapy per month (after 6 months from the initial diagnosis) but payment for this psychotherapy was based on the same rate for psychiatrists as for general practitioners. In the Maritimes, Maritime Medical Care Inc., paid for one visit for psychotherapy per week at the rate of \$3.00.

Payment for psychiatrists' care in general hospitals also varied widely. Maritime Hospital Services Association limited payment for hospital care by psychiatrists to up to 30 days for any such hospital admission, but not exceeding 70 days during the participant's lifetime. Quebec Hospital Services Association paid for up to 70 hospital visits during 12 consecutive months. In Ontario, P.S.I. limited payments for hospital care to \$15 per week after 4 weeks of hospitalization; and Manitoba Medical Service paid \$42.00 per month of hospital care after 4 weeks. M.S.A. and M.S.I. in British Columbia and MS(A)I in Alberta had no limitations upon the costs of hospital visits.

There are marked limitations placed upon psychiatrists' care by nearly all of the major comprehensive medical insurance plans. Goldman<sup>20</sup> has compared such a situation, wherein physicians are trained and hospitals built without organizing the payment for their services, to inviting people to enter a locked house without giving them the key.

### **Payment to Family Physicians for Care of Psychiatric Illness**

Although there is considerable psychiatric illness among patients seen by family physicians,<sup>21</sup> relatively little provision has been made by the medical insurance plans for the care of such illnesses by family physicians.<sup>22</sup>

<sup>19</sup>Manitoba Medical Association; Manitoba Medical Services; briefs submitted to the Royal Commission on Health Services, Winnipeg, January 1962. M.M.S. included treatment for alcoholism and drug addiction.

<sup>20</sup>Goldmann, F., Adequacy of medical care, *Yale J. Biol. Med.* 19:682-688, 1947.

<sup>21</sup>*Ibid.*, Part V. The Extent of Psychiatric Morbidity and Care.

<sup>22</sup>Exceptions to this are found in Medical Services (Alberta) Inc., where over one-half of the payment in 1960 for psychiatric illnesses was made to non-psychiatrists, and in the 1962 revision of the Ontario Medical Association Schedule of Fees.



The practice and financing of psychotherapy by Canadian family doctors has been commented upon by Rorie:<sup>23</sup>

"...My chief interest was in psychotherapy, and I was surprised and disappointed to find that this was the only field in which the family doctor was not paid for his work. In one province I found that while a practitioner was paid \$10 for circumcision, \$100 for appendectomy, not to mention cholecystectomy and hysterectomy, he was paid nothing for the most minor efforts in psychiatry. In some areas a fee of \$10 had been recommended, but it was rarely paid. I saw an admonition to the practitioner that claims for such a fee should be given careful thought before being rendered. Long term psychotherapy by the family physician has no financial reward whatever, and even in the hands of the specialist is limited in scope. The psychiatrist is paid what seems to be an adequate fee of \$15-20 per hour, but there is a ceiling figure to therapy. I was told that this had brought about an increase in the number of patients receiving maximum treatment, and I feel that one might be forgiven doubting the sincerity of the psychotherapist who accepts patients for treatment under these limiting conditions.

"If then, a practitioner rendered an account with a diagnosis of neurosis, and treatment psychotherapy, he would not be paid—or at most only for an office call.

"This was the main weakness of the scheme to my mind. Explanations by the paying bodies varied from : 'These neurotics don't need any treatment anyway' to 'We should pay for this, but psychotherapy is too nebulous to define for actuarial assessment'. However they have no difficulty in assessing specialist psychotherapy, even though it is limited, and so the latter argument is not tenable. It was also pointed out to me that a very large proportion of the cost of these prepaid plans is made up of first and second office calls, which must be taken up with psychotherapy in any case, irrespective of what returns were made.

"It might well be that if the paying authorities were prepared to face the incidence and proper treatment of psychoneurotic illness, and to pay for it, there would be a drop in incidence of apparent organic illness and investigation which could be more than compensatory.

"...As to the question of psychiatric care by the family doctor, I found...there is still a common attitude of rejection towards the psychoneurotic patient, with the excuse that his treatment is too time-consuming and frustrating. Even where training is now not lacking, conditions of practice tend to prevent the best treatment. Physicians are only human, and if a community pays them well for engaging in organic medicine and surgery and nothing for treating mental and emotional illness, they cannot be blamed for engaging in the former."

### **Submissions to the Royal Commission on Health Services Regarding Medical Insurance for Psychiatric Illnesses**

The provision of medical insurance for psychiatric illness on the same basis as other illness was emphasized in many briefs.

#### *Canadian Medical Association*

"Two areas of service to persons requiring special attention emerge as pressing needs in all parts of Canada. We recommend:

10) That a complete overhaul of the mental health program be undertaken to provide considerably improved services to the large body of Canadians who suffer from psychiatric disorders. The essential improvements include

<sup>23</sup>Rorie, R. A. B., *Psychiatry and general practice in North America, Canada's ment. Hlth.* Supplement No. 35, March 1963.

(a) the recognition of mental illness as the equivalent of physical illness and the encouragement of the care of the psychiatric patient in his own community."<sup>24</sup> In addition, "It is the objective of the profession that psychiatric illness be included under (medical services) insurance on the same basis as other illness."<sup>25</sup>

### *Ontario Medical Association*

The submission of the Ontario Medical Association recommended:

"THAT mental illness be recognized as our most serious health problem; that there be a change in approach to the management of the mentally ill to bring it into line with that of other illnesses, with particular reference to out-patient services, hospitalization, rehabilitation and insurance coverage; and that psychiatric research be expanded.

"THAT priority be given to suggested improvements in the management of mental illness, the provision of health services facilities, and the recruitment and education of sufficient health services personnel."<sup>26</sup>

The recommended changes in the management of mental illness included the development of a pattern for the provision of and insurance for medical services in keeping with what now pertains for the physically ill.<sup>27</sup>

### *Canadian Psychiatric Association*

"Many other physicians treat patients with psychiatric illness and disabilities. It is important that this be encouraged and developed, as only in this way does it seem possible to provide treatment for the extensive psychiatric morbidity which exists in our communities. To encourage this it will be necessary to remunerate those physicians, as well as psychiatrists, for the treatment of psychiatric conditions."

### **"Recommendation III:**

Therefore it is recommended:

That physicians specializing in psychiatry or engaged in other areas of medical practice who provide treatment directly to patients be remunerated on the same basis as other physicians."<sup>28</sup>

### *Canadian Mental Health Association*

It was recommended that any plan of comprehensive hospital and medical treatment insurance must include comprehensive psychiatric hospital and treatment services for the mentally ill without discrimination or exclusion.<sup>29</sup>

## **Conclusions**

(i) Major discrepancies exist in provincial inclusion of mental hospitals within hospital insurance programmes.

<sup>24</sup> Canadian Medical Association, brief submitted to the Royal Commission on Health Services, Toronto, May 1962, p. 5.

<sup>25</sup> *Ibid.*, para. 48, p. 7.

<sup>26</sup> Ontario Medical Association, brief submitted to the Royal Commission on Health Services, Toronto, May 1962, Recommendations 11 and 14, p. ix.

<sup>27</sup> *Ibid.*, para. 177, p. 53.

<sup>28</sup> Canadian Psychiatric Association, brief submitted to the Royal Commission on Health Services, Toronto, May 1962, p. 9.

<sup>29</sup> Canadian Mental Health Association, brief submitted to the Royal Commission on Health Services, Toronto, May 1962, p. 28.

(ii) Medical insurance plans vary widely in their provision for psychiatrists' care, but some form of limitation or exclusion of psychiatric care existed in eight out of nine members of Trans-Canada Medical Plans at the end of 1962.

(iii) In five of Trans-Canada Medical Plans' comprehensive programmes providing some psychiatrists' care during 1960, costs ranged from 10¢ to 50¢ per member-year.

(iv) Payment for psychotherapy by trained and interested family physicians is made by few medical insurance plans.

(v) The provision of medical insurance for psychiatric illness on the same basis as for other illness was emphasized in many of the briefs presented to the Royal Commission on Health Services.





## PSYCHIATRISTS' CARE FOR MEMBERS OF MEDICAL SERVICES ASSOCIATION, VANCOUVER, 1957-1961

### Introduction

Medical Services Association (M.S.A.), a member of Trans-Canada Medical Plans, is a non-profit voluntary plan providing prepaid medical care for the personnel and employers (and their dependents) of British Columbia firms with 10 or more employees. In 1958 over 400 thousand employees, employers and dependents, about one-fourth of British Columbia's population, were enrolled in M.S.A.

During 1957-1961 M.S.A. members referred by family physicians were eligible for up to 15 hours of psychotherapy per 12-month period. In addition, M.S.A. included payment without limitation for visits to patients hospitalized in psychiatric divisions of general hospitals, and for out-patient electrotherapy.

A previous report by the author has described the pattern of psychiatric services utilized by M.S.A. members seen by Vancouver psychiatrists during 1957.<sup>1</sup> All of the 15 private psychiatrists in Metropolitan Vancouver participated in the plan. These qualified psychiatrists included various denominations of psychiatric belief and therapeutic orientation. In that year the 15 psychiatrists had initial consultations with 608 M.S.A. members, resident in Metropolitan Vancouver, who had been referred by family physicians.

This chapter<sup>2</sup> describes the frequency and distribution of referral, the duration and costs of psychiatrists' care over a 5-year period, the maintenance of enrolment in the plan, and changes in medical costs over a 7-year period, for a group of patients and a group of "controls".

It is noteworthy that the basic information required for estimates of utilization in the following two chapters was contained within the routine data maintained for administrative purposes. The routine records of many prepaid medical insurance plans can presently be readily utilized for various epidemiological studies on psychiatric care.<sup>3</sup>

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<sup>1</sup>Richman, A., and Bezereci, T., *op. cit.*

<sup>2</sup>The full co-operation of A. L. McLellan (Executive Director), G. L. Watson, M.D. (Director of Medical Services), and A. Hunter (Comptroller) of M.S.A. is sincerely appreciated.

<sup>3</sup>Colman, J. D., and Morrison, N., Opportunities in operation in *Social Insurance, Some problems for statistical insurance* (Ed. Day, L. H.), Papers presented at the Annual Meeting of AAAS, New York, Dec. 1960, New York: The Bureau of Applied Social Research, Columbia University, 1961.

## Method

From a list of all M.S.A. members seen by Vancouver psychiatrists there were derived the names of patients residing in Metropolitan Vancouver for whom an initial consultation had been recorded during 1957.<sup>4</sup> It is assumed that the number of Vancouver members seen by Victoria psychiatrists was negligible.

One control group was formed by selecting members who worked in the same firm as the patient (or the subscriber for the patient) and had enrolled in the plan at the same time. These controls therefore had a similar length of membership and generally resided within Metropolitan Vancouver.<sup>5</sup> A second control group was randomly selected from the entire membership at mid-1957, in order to estimate the proportion living in Metropolitan Vancouver.

For the patient-group, and members of the two control groups, the following data were compiled from enrolment applications and microfilm records of account cards:<sup>6</sup>

- demographic characteristics of the subscriber and dependents,
- history of plan-enrolment, cancellations, reinstatement and transfers,
- annual family medical costs between Jan. 1, 1955, and Dec. 31, 1961.

Additional data were collated on the annual costs of psychiatrists' care, and the dates of initial and last psychiatric contact between 1957-1961 for patients receiving psychiatric consultation.

## Frequency of Initial Psychiatric Consultation

### *Frequency of Consultation*

The rate of consultation was analyzed for the 608 M.S.A. members resident in Metropolitan Vancouver, referred to the 15 private psychiatrists for initial consultations during 1957.<sup>7</sup>

The frequency of referral for various demographic groups was estimated by means of Cornfield's relative risk method.<sup>8</sup> A total of 551 adult patients, a rate of 394 per 100,000 adult members,<sup>9</sup> were referred by family physicians for private psychiatric consultation during 1957.<sup>10-11</sup>

<sup>4</sup>Initial consultations were designated by the psychiatrist since the payment for an initial consultation was higher than for psychotherapy.

<sup>5</sup>It is recognized that controls selected by this method are theoretically more liable to have characteristics *similar* to those of the patients, and thus any differences in demographic characteristics elicited in this study would tend to be minimized; that is, the "true" differences would be greater.

<sup>6</sup>This clerical work was done by M.S.A. personnel supervised by the author. Subsequent statistical analyses and interpretation of the data were the responsibility of the author.

<sup>7</sup>Patients who were recorded as having seen a psychiatrist prior to Jan. 1, 1957, were deleted from the study.

<sup>8</sup>Cornfield, J., A method of estimating comparative rates from clinical data. Applications to cancer of the lung, breast, and cervix. *J. natn. Cancer Inst.* 11:1269-1275, 1951.

<sup>9</sup>Less than one per cent of adult members were over 65 years old.

<sup>10</sup>In examining the medical costs of controls it was found that four out of approximately 800 controls who remained enrolled during 1959, had received initial psychiatric consultation during 1959—a rate of five per 1,000.

<sup>11</sup>Among personnel aged 17-64 of the Metropolitan Life Insurance Co., new cases of disability, due to psychoneuroses and psychoses, lasting 8 days or more, amounted to 4.3 per 1,000 males and 7.0 per 1,000 females annually. *Metrop. Life Ins. Co. Statist. Bull.* 43, March 1962, p. 8.

Psychiatric consultation required both referral by a physician, and attendance by the patient. This rate of 0.4 per cent represents patients:

- recognized as having a psychiatric problem by their physician,
- considered to require psychiatric consultation by their physician,
- willing and able to visit the psychiatrist, and
- whom the psychiatrist was able to see.

Since psychiatric consultation was paid by the plan, the effect of the patient's economic status was minimized in determining the family physician's decision for psychiatric consultation.

TABLE 17-1  
CONSULTATION WITH PRIVATE PSYCHIATRISTS DURING 1957, ESTIMATED ANNUAL  
FREQUENCY PER 100,000 AND STANDARD ERROR, ADULT M.S.A. MEMBERS  
RESIDING IN METROPOLITAN VANCOUVER

		Age of Subscriber			
		15-44		45+ <sup>1</sup>	
		Male Subscriber	Wife	Male Subscriber	Wife
MARRIED SUBSCRIBERS					
Number of dependent children-0	N=	24	32	15	41
	Frequency	274 ±56	365 ±64	151 ±39	411 ±64
1-2	N=	72	97	19	40
	Frequency	414 ±49	558 ±57	266 ±61	560 ±88
3+	N=	37	60	2	9
	Frequency	361 ±60	586 ±76	62 ±44	279 ±93
Total	N=	133	189	36	90
	Frequency	364 ±32	520 ±38	177 ±30	442 ±47
WORKING WIVES					
	N=		26		2
	Frequency		1,200 ±235		..
SINGLE SUBSCRIBERS		15-44		45+	
		Male Subscriber	Female Subscriber	Male Subscriber	Female Subscriber
N=		31	32	0	4
Frequency		442 ±79	330 ±58	- -	212 ±106

<sup>1</sup>This age group contained few patients over the age of 65. Fewer than 680 of the total M.S.A. membership were over 65 years old.

Demographic Variation in Consultation Rates

Psychiatric consultation was most frequent among working wives, and solitary parents with dependent children. In comparison to 0.4 per cent of all



adult members, over one per cent of working wives,<sup>12</sup> and nearly 3 per cent of solitary parents<sup>13</sup> were referred to psychiatrists during the year.

Among married members, the frequency of referral was consistently higher for wife-dependents than for employed husbands. Among employed husbands, the frequency of referral was higher among those aged under 45, than for those over 45. This age difference in the frequency of psychiatric consultation did not apply to wives to the same extent.

For subscribers under the age of 45, the frequency of consultation was lowest for those with no dependent children; while for older subscribers consultation was less frequent among those with three or more dependent children.

Among single subscribers under the age of 45, psychiatric consultation was more frequent in males than females while over the age of 45 the reverse occurred. Single females under the age of 45 had rates similar to wives without dependent children, and rates lower than for wives with dependent children.<sup>14</sup>

It is not possible to differentiate whether more psychiatric illness or disability occurs among women than men. The increased frequency of psychiatric consultation among women may be related to factors in the referral process which involve differences in the attendance and expression of complaints to physicians, and the attitudes or expectations of physicians and patients.

#### *Length of Enrolment and Consultation Rate*

The rate of consultation was estimated for various lengths of continuous enrolment in order to assess the effects of hypothetical waiting periods, and the relation of referral to "stability" of enrolment.

The number of adult M.S.A. members resident in Metropolitan Vancouver, categorized by length of continuous enrolment, was estimated from the sample of the general membership. Since the sample of the general membership was derived from the membership list at mid-1957, the number of persons with a particular characteristic enrolled at that time would approximate the annual person-years represented by persons with that characteristic.<sup>15</sup>

<sup>12</sup>The 1961 Canadian Census enumerated nearly 900,000 married women in the labour force, accounting for nearly half the total female labour force. The effect on "family life" must also be considered.

"The deleterious influence on the family life and on the children of the mother's working outside the home has become evident in our analysis. As regards the special impact on delinquency this too has emerged. There is evidence of a differential influence of the working mother on family life, on children and on delinquency. There is some suggestion in our data that these influences are more potent when deriving from the mother who works sporadically than from the regularly employed mother." Glueck, S., and Glueck, Eleanor, *Working mothers and delinquency*, *Ment. Hyg. (N.Y.)* 41:327-352, 1957.

<sup>13</sup>Eight solitary parents with dependent children were referred during the year, a rate of  $3 \pm 1\%$ .

<sup>14</sup>This lack of higher rates for single females may be due to this group being employed.

<sup>15</sup>The membership at June 30, 1957 was estimated to include 34,000 adult members from Metropolitan Vancouver, whose continuous membership began between Jan. 1 - June 30, 1957. Although additional members were enrolled during the remainder of 1957, cancellations also occurred. With the assumption that enrolment and cancellation occurred at a uniform rate throughout 1957, an estimated 34,000 person-years of membership were spent in the plan during 1957 by recently enrolled members, although more than 34,000 persons enrolled or reinstated their membership during 1957.



The frequency of psychiatric consultation in 1957 was calculated for three separate enrolment periods—members continuously enrolled since 1957, those enrolled during 1955-56, and those enrolled earlier than 1955. On a person-year basis the frequency of consultation<sup>16</sup> was less among persons enrolled (or reinstated) during 1957 than for those who had longer lengths of membership.

TABLE 17-2  
FREQUENCY OF REFERRAL BY YEAR OF CONTINUOUS ENROLMENT,  
ADULT M.S.A. MEMBERS RESIDING IN METROPOLITAN VANCOUVER, 1957

Year of Enrolment	Estimated Vancouver Membership (thousands)	Patients	Rate per 100,000
Before 1955 . . . . .	60	261	437
After 1955 . . . . .	80	290	362
During 1955-56	46	206	446
During 1957	34	84	248
ALL	140	551	394

*Source of Referral*

Three-quarters (76 per cent) of the patients had been referred by general practitioners, and one-fourth by qualified specialists. One-half of the specialist referrals came from internists and surgeons.

Since the patient load of various types of specialists is not known, it is not possible to determine the frequency of referral from various types of specialist.

**Membership History, 1957-1961**

The subscribers of the patient and control groups did not remain continuously enrolled in the plan. This section describes the maintenance of membership up to the end of 1961. The membership history of adult patients is compared with that of controls in order to estimate the "employment stability" of employee-patients, or of the subscriber-husband of patients.

*Continuous Membership between 1957 and the End of 1961*

This does not necessarily imply that the subscriber continued in the same job, since continuous membership may be retained through employment with a series of firms participating in M.S.A. Secondly it was possible for subscribers enrolled more than 10 years to continue individual M.S.A. membership.

A greater proportion of controls (59 per cent) than adult patients (53 per cent) remained continuously enrolled.

<sup>16</sup>A central rate rather than a probability.

**TABLE 17-3**  
**MEMBERSHIP HISTORY**  
**M.S.A. MEMBERS RESIDING IN METROPOLITAN VANCOUVER, 1957**

	Controls <sup>1</sup>	Patients		
		All	Adults	Children
ALL .....	608 = 100%	608 = 100%	551 = 100%	57 = 100%
Retained continuous membership to Dec. 31, 1961.....	360 = 59	311 = 51	290 = 53	21 = 37
Cancelled before Dec. 31, 1961.....	248 = 41	297 = 49	261 = 47	36 = 63
<i>Year of cancellation</i>				
1957.....	84 = 14	94 = 15	85 = 15	9 = 16
1958.....	58 = 10	83 = 14	75 = 14	8 = 14
1959.....	40 = 7	55 = 9	51 = 9	4 = 7
1960.....	39 = 6	35 = 6	27 = 5	8 = 14
1961.....	27 = 4	30 = 5	23 = 4	7 = 12
<i>Disposition of cancellations<sup>2</sup></i>				
Total.....	248 = 100	297 = 100	261 = 100	36 = 100
Transferred to MSI <sup>3</sup> .....	35 = 14	41 = 14	38 = 14	3 = 8
Reinstated later.....	41 = 17	34 = 11	32 = 12	2 = 6
Not reinstated later.....	172 = 69	201 = 68	191 = 74	10 = 28
Dependent patient no longer eligible <sup>4</sup> .....		21 = 7		21 = 58
<i>Number of members enrolled</i>				
Dec. 31, 1961, N=.....	388	330	309	21
Per cent of original enrolment.....	64	54	56	37

<sup>1</sup> Subscribers.<sup>2</sup> Cancellations occurring for first time between 1957 and 1961.<sup>3</sup> Plan offering individual enrolment.<sup>4</sup> Children over the age of 18 were required to obtain their own membership.

**TABLE 17-4**  
**RETENTION OF CONTINUOUS MEMBERSHIP, BY YEAR DURING WHICH**  
**CONTINUOUS ENROLMENT BEGAN,**  
**M.S.A. MEMBERS RESIDING IN METROPOLITAN VANCOUVER, 1957**

Year in which Continuous En- rolment Began	Percentage of Subscribers Retaining Continuous Membership to the End of			
	1959		1961	
	Adult Patients	Controls	Adult Patients	Controls
ALL.....	62	70	53	59
Before 1955 .....	77	81	69	73
1955 .....	56	72	47	61
1956 .....	49	56	39	42
1957 .....	38	55	28	38

Maintenance of continuous membership was less for recently enrolled subscribers than for subscribers of longer duration. Cancellation was most frequent among subscribers enrolled during 1957, and decreased progressively for subscribers of longer enrolments.<sup>17</sup> When comparisons are made for subscribers of the same duration of membership, patients consistently had a higher frequency of cancellation than controls.

#### *Cancellation of Membership between 1957 and 1961*

Cancellation may have been due to the subscriber leaving his job and either remaining unemployed or being employed in a firm not participating in M.S.A. Cancellation also occurred if the subscriber left the province. Dependent children ceased to be enrolled upon reaching the age of 17 before 1958, or age 18 subsequently. The dates given for cancellation refer to the year during which the first cancellation occurred. The frequency of cancellation was similar for both patient and control groups during 1957, but higher for adult patients than controls during 1958 and 1959.

Among subscribers maintaining membership until the end of 1959; the frequency of cancellation before the end of 1961 was similar for both controls and patients.

	<u>Patients</u>	<u>Controls</u>
Number of subscribers retaining continuous membership from 1957 to end of 1959	340=100.0%	426=100.0%
Cancellations during 1960 and 1961	50= 14.7%	66= 15.5%

A similar proportion of cancellations among both controls and adult patients transferred to individual membership in another plan (M.S.I.). A higher proportion of cancelling controls (17 per cent) than adult patients (12 per cent) subsequently reinstated their M.S.A. membership. Among reinstated subscribers, fewer of the adult patients (59 per cent) than controls (68 per cent) remained members at the end of 1961.

#### *Membership Status at Dec. 31, 1961*

This includes members with both continuous and intermittent enrolment. Wives who consulted psychiatrists during 1957 may not be members at the end of 1961 because of changes in employment of the subscriber or because of marital separation. This analysis compares the experience of controls, subscriber-patients, and subscriber-husbands of patients.

A higher proportion of controls (64 per cent) than subscriber-patients (48 per cent) were members at the end of 1961. These differences remained when subscribers were classified by age, sex, marital status and number of dependent children.

The over-all proportion of married controls and subscriber-husbands of patients who remained members at the end of 1961 was also different, 78 per cent and 63 per cent respectively. When comparisons are made for groups of similar demographic characteristics, it is seen that this membership lapse was higher among younger subscriber-husbands of patients. Among married male subscribers under the age of 45 with no children, 74 per cent of controls remained

<sup>17</sup>This has also been described for members of Health Insurance Plan, New York. Densen, P.M., Deardorff, Neva R., and Balamuth, E., Longitudinal analyses of four years of experience of a prepaid comprehensive medical care plan. *Milbank meml. Fund* q. 36:1-45, 1958.

members in contrast to 31 per cent of those whose wives had received a psychiatric consultation.

**TABLE 17-5**  
PERCENTAGE OF PATIENTS AND CONTROLS RETAINING M.S.A. MEMBERSHIP  
AT DECEMBER 31, 1961,  
M.S.A. MEMBERS RESIDING IN METROPOLITAN VANCOUVER, 1957

Age of subscriber	Under 45			45 +		
Number dependent children	0	1-2	3+	0	1-2	3+
Married male controls.....	74%	72%	76%	65%	77%	78%
Married male patients.....	67	54	60	40	74	—
Subscriber-husbands of patients.....	31	63	75	68	70	56

It is striking that the employment stability (as reflected by retention of membership in a health insurance plan requiring employment in a firm of at least nine employees) of both employees and husbands of wives who consulted psychiatrists was less than that for the control population.

This relationship of psychiatric consultation and decreased employment stability was not solely due to loss of employment preceding the psychiatric consultation in 1957 since a *similar* proportion of controls and patients had their membership cancelled during 1957. In fact, the proportion of all cancellations occurring during 1957 was slightly higher for controls than patients, 34 per cent and 33 per cent respectively.<sup>18,19</sup>

It is not possible to determine from the available M.S.A. records the subsequent employment status of cancellations. Further case studies would be required to determine this occupational history.

## Types of Psychiatric Services

### *Consultation Only without Subsequent Psychotherapy*

One-sixth of all patients were seen for consultation only. Among the 311 patients with continuous membership between 1957 and 1961, the same proportion (16 per cent) did not return for further psychotherapy.

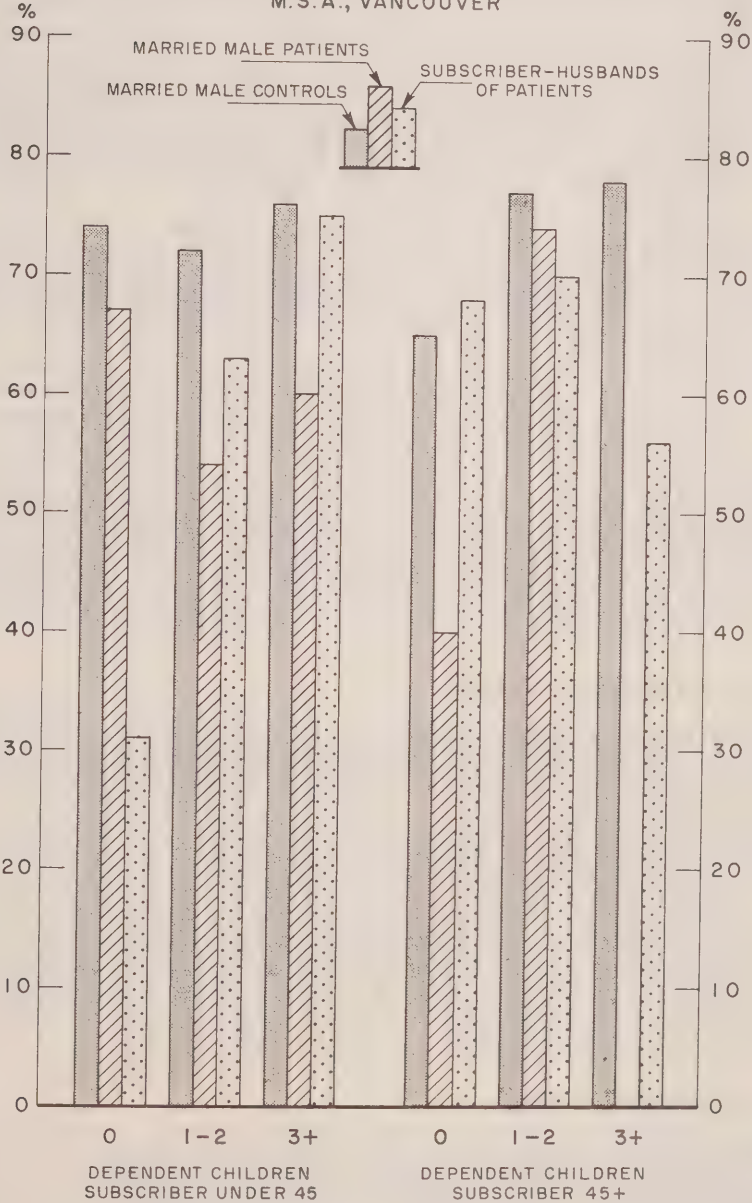
<sup>18</sup>The effect of unemployment upon the mental health of the unemployed person and his family was described in a study of 1,003 unemployed males in Montreal during the mid-1930's. "About six per cent of the unemployed group were considered to reveal definitely psychoneurotic trends". "It became clear... that the mental and physical ill-health associated with unemployment is even more a family than an individual phenomenon...", Marsh, L. C., Fleming, A. G., & Blackler, C. F., *Health & Unemployment*, McGill Social Research Series, No. 7, Toronto: Oxford University Press, 1938.

<sup>19</sup>Similarly a more recent Pittsburgh study demonstrated the association and contagiousness of health and social problems. "It is shown that the presence of a health problem in one of the family members is accompanied by the presence of health problems in the other family members more often than we would expect if health problems were randomly distributed in the population. The same kind of relationship also appears to be true of social problems. A basic finding is that *healthy* persons in families reporting illness had a greater risk of being known to social agencies for reasons of behaviour than persons in families not reporting illness." "Further, it is found that the observed distribution of health problems in families is not independent of the observed distribution of social problems in these families. Therefore, we can conclude that, in addition to factors which affect the health experience of individuals in families and factors which independently affect the social welfare experience of individuals in families, there are factors which affect both jointly." Hrubec, Z., *The association of health and social welfare problems in individuals and their families. Milbank meml. Fund q.* 37:251-276, 1959.



FIGURE 17-1

PERCENTAGE RETAINING MEMBERSHIP AT DEC. 31, 1961  
FOR MARRIED MALE CONTROLS AND PATIENTS,  
AND SUBSCRIBER HUSBANDS OF PATIENTS  
BY AGE GROUP, NUMBER OF DEPENDENT CHILDREN  
M.S.A., VANCOUVER



### *Hospitalization and Electrotherapy, 1957*

During 1957, 13 patients received electrotherapy on an out-patient basis. In addition, 8 per cent (N=46) of the adults were hospitalized in a psychiatric unit of a general hospital, or in a provincial psychiatric hospital. Data were not available on the number of M.S.A. members hospitalized in a public mental hospital or private psychiatric hospital, or who had been hospitalized in provincial institutions without prior private psychiatric consultation during 1957.

Among the 46 members hospitalized during 1957, the longest hospitalization was 86 days, and the mean stay was 38 days. The total plan expenditure for private psychiatric care for these 46 patients was \$8,015 up to the end of 1961. For the 29 patients with continuous membership the total expenditure was \$5,642, a mean of \$194, during the period 1957-1961.

### *Continuity of Psychiatric Care for Hospitalized Patients*

Some of the patients hospitalized in the provincial psychiatric hospital had received out-patient electrotherapy before admission, and others were first seen by the psychiatrist after discharge.

Five-sixths of the 30 patients hospitalized in the psychiatric unit of the general hospital were seen by psychiatrists *both* before and after hospitalization. Among patients having continuous membership between 1957 and the end of 1961, four out of 10 patients (40 per cent) discharged from provincial psychiatric hospitals, and 14 out of 19 (74 per cent) patients discharged from psychiatric units of general hospitals were seen by private psychiatrists at some time later than 3 months after discharge. Continuity of care was more frequent among patients hospitalized in the psychiatric unit than for those hospitalized at the provincial psychiatric hospital.

### **Duration of Psychiatric Contact**

This refers to the interval between the initial psychiatric consultation during 1957 and the last date of psychiatrist's care recorded up to the end of 1961. This interval does not necessarily represent continuous or regular psychiatric care.

Nearly one-half (45 per cent) of all patients were seen for less than one month by the psychiatrists. One-third (29 per cent) were seen for an interval longer than six months. Among the 311 patients with continuous membership between 1957 and the end of 1961, nearly two-fifths (38 per cent) were seen for intervals longer than six months. One-half of these patients seen by psychiatrists for intervals longer than six months had psychiatric costs under \$200.

### **Costs of Psychiatric Care**

Between 1957 and the end of 1961, members of M.S.A. were eligible to have up to 15 hours of psychotherapy per 12-month period paid by the Plan. This represents a maximum entitlement of between 60 and 75 hours of psychotherapy during the 4- to 5-year period. Physicians' payment for psychotherapy amounted to \$13.50 per hour during 1957 to 1959, and \$18.00 subsequently.

TABLE 17-6

MAXIMUM DURATION<sup>1</sup> OF RECORDED CONTACT WITH PSYCHIATRISTS, 1957-1961,  
M.S.A. MEMBERS RESIDING IN METROPOLITAN VANCOUVER, 1957

	All Patients	Patients with Continuous Membership during the Five Years
ALL .....	608 = 100%	311 = 100%
Less than 1 month .....	273 = 45%	125 = 40%
2 - 3 months .....	81 = 13%	26 = 8%
4 - 6 months .....	70 = 12%	41 = 13%
7 - 12 months .....	45 = 7%	23 = 7%
13 - 24 months .....	45 = 7%	27 = 9%
25 - 36 months .....	39 = 6%	25 = 8%
37 - 48 months .....	31 = 5%	25 = 8%
49 - 56 months .....	24 = 4%	19 = 6%

<sup>1</sup> Interval between month of initial contact in 1957 and month of last recorded contact, up to the end of 1961.

The psychiatric costs recorded for patients were the total amounts paid to psychiatrists, and include the costs of initial consultation, hospital visits, and electrotherapy as well as for psychotherapy. The extent of extra-billing, and payments made by the patient for psychotherapy over 15 hours per year were not known and therefore excluded from the cost calculations.

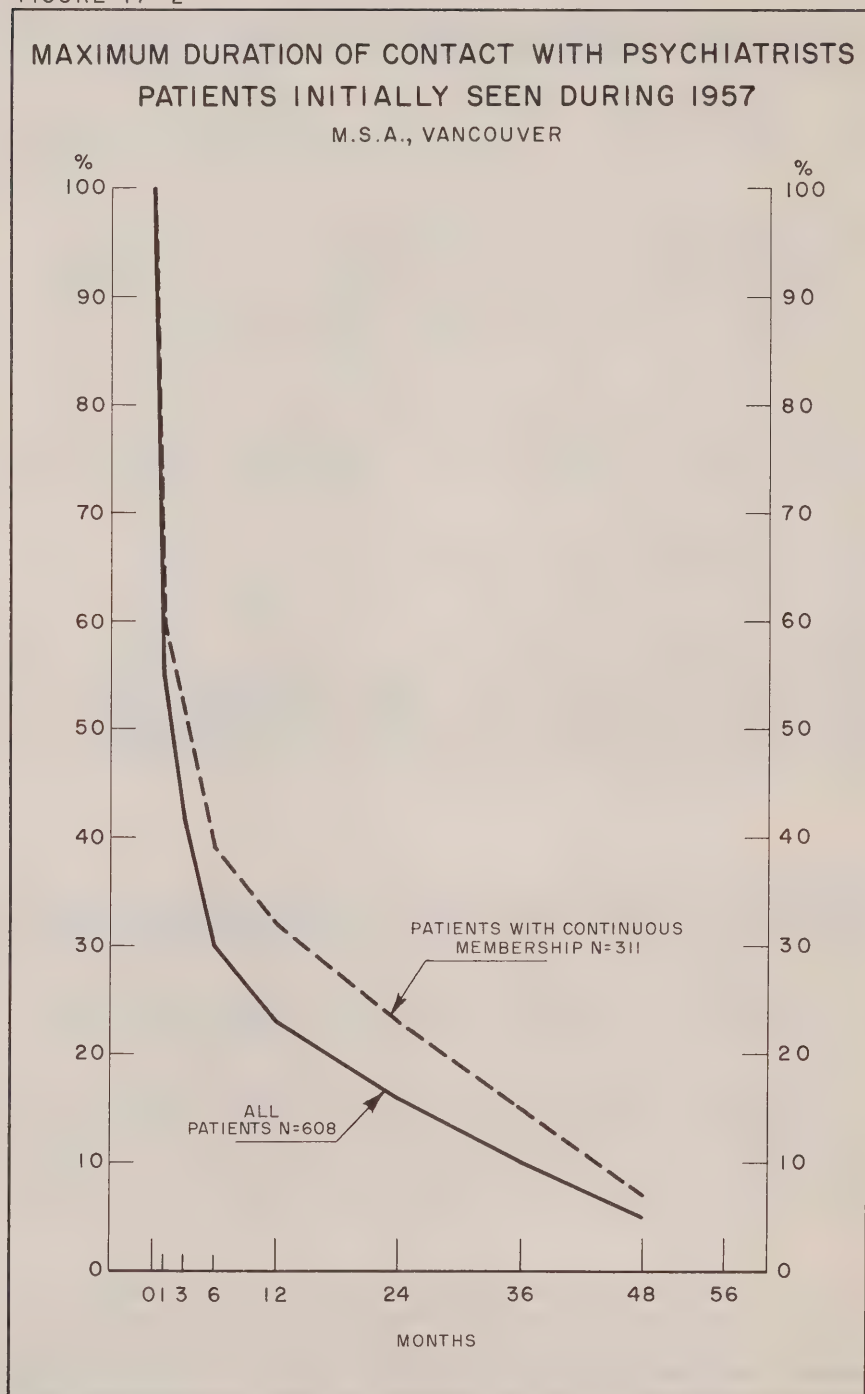
Over-all Costs

One-sixth of patients did not have psychotherapy following their initial consultation. The majority (60 per cent) of patients had less than \$100 paid by the Plan to psychiatrists in private practice. Less than one-tenth of the patients (9 per cent) cost more than \$300. For the remaining 31 per cent of patients, the Plan spent between \$100-\$299. Although the entitlement for psychotherapy exceeded \$1,350, 3 per cent of patients cost the Plan more than \$500.

The distribution of psychiatric costs varied with the membership history of the patients. Over one-half (N=311) of the 608 patients retained continuous membership between 1957 and the end of 1961; and 10 per cent of these patients had psychiatric costs over \$300. One-tenth (N=65) of the patients cancelled membership during 1960 or 1961, and 22 per cent of these patients had cost the Plan more than \$300.

The mean Plan expenditures per patient with continuous membership from 1957 to 1961 was \$136. This amount represents the costs of private psychiatric care during a period of over four years. The mean costs were higher for recently enrolled patients than for patients enrolled more than 2-3 years, \$162 and \$120 respectively. It is not known to what extent this is due to the factor of

FIGURE 17-2





recent enrolment *per se*, or to differences in the demographic characteristics of patients with varying lengths of enrolment.

TABLE 17-7  
DISTRIBUTION OF PSYCHIATRISTS' COSTS, 1957-61, BY MEMBERSHIP HISTORY,  
M.S.A. MEMBERS RESIDING IN METROPOLITAN VANCOUVER, 1957

Length of Membership	All		Under \$20		\$20-99		\$100-199		\$200-299		\$300 +	
	N	%	N	%	N	%	N	%	N	%	N	%
ALL .....	608	= 100	94	= 16	268	= 44	124	= 20	68	= 11	54	= 9
Continuous since:												
before 1955 .....	193	= 100	26	= 14	86	= 45	45	= 23	21	= 11	15	= 8
after 1955 .....	118	= 100	22	= 19	34	= 29	28	= 24	18	= 15	16	= 14
Cancelled <sup>1</sup> : 1957-59 .....	232	= 100	38	= 16	125	= 54	37	= 16	23	= 10	9	= 4
1960-61 .....	65	= 100	8	= 12	23	= 35	14	= 22	6	= 9	14	= 22

<sup>1</sup>Membership may have been reinstated before December 31, 1961.

Demographic Variation in Costs

Three-fifths of all patients cost the Plan less than \$100, one-fifth between \$100-199, and one-fifth over \$200. The distribution of psychiatric costs differed in the various demographic groups. A higher proportion of children had psychiatric costs under \$100 than the total patient group. This reflects the absence of a child psychiatrist in private practice during 1957. Single females were the group having the highest proportion with costs over \$200.

TABLE 17-8  
PERSONAL CHARACTERISTICS AND PSYCHIATRIC COSTS, 1957 - 1961,  
M.S.A. MEMBERS RESIDING IN METROPOLITAN VANCOUVER, 1957

	Number	Under \$100	\$100-199	\$200 +
ALL .....	608 = 100%	60%	20%	20%
Single male .....	31 = 100%	55%	16%	29%
Single female .....	37 = 100%	49%	21%	30%
Married male .....	169 = 100%	60%	22%	18%
Wife .....	279 = 100%	57%	22%	21%
Working wife .....	27 = 100%	74%	7%	19%
Parent, solitary with dependent child .....	8 = 100%	50%	25%	25%
Male child .....	26 = 100%	66%	15%	19%
Female child .....	31 = 100%	78%	16%	6%

A smaller percentage of employed husbands than wife-dependents had more than \$200 of psychiatric care, both for those with continuous or interrupted membership.

FIGURE 17-3

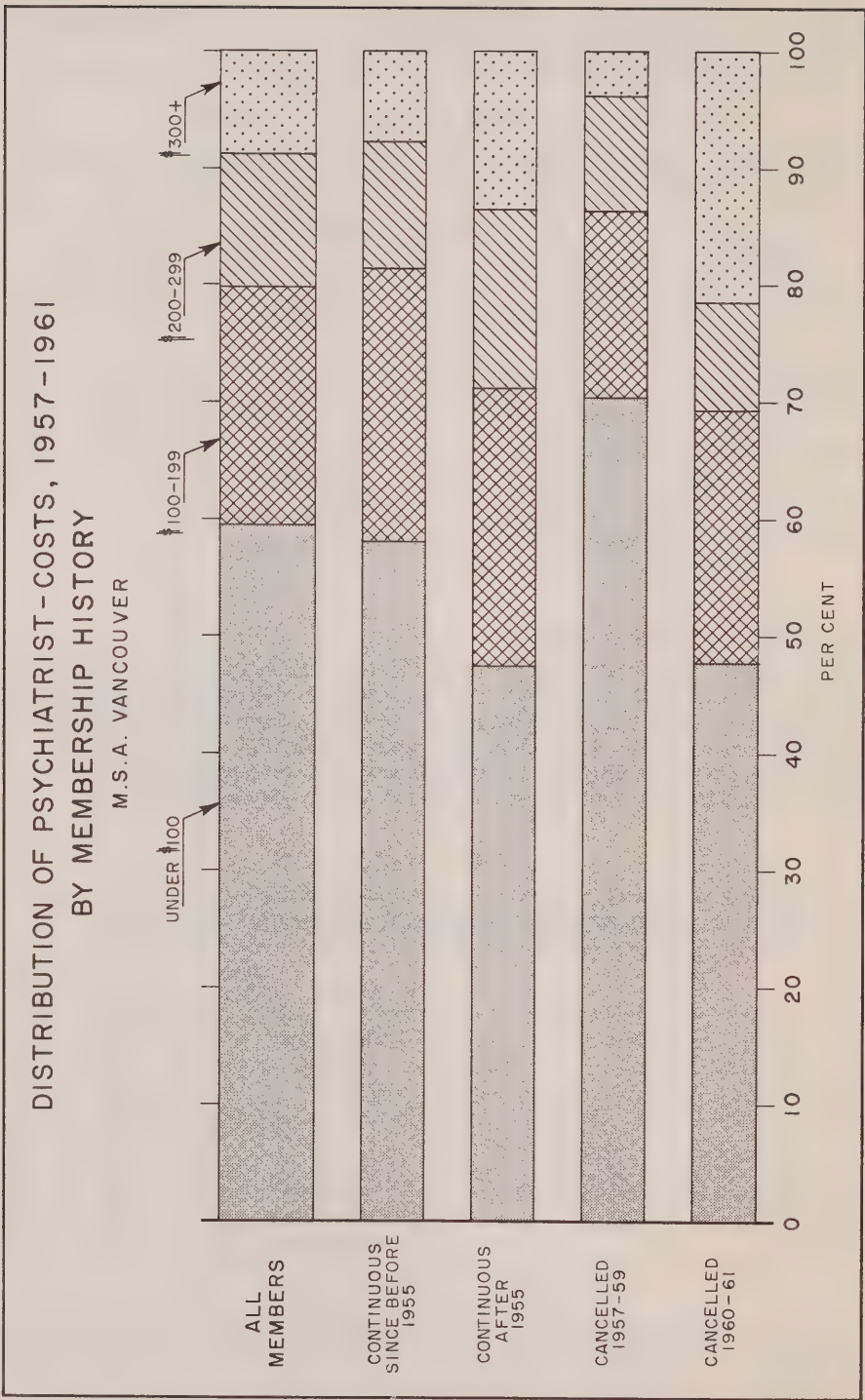


TABLE 17-9  
PSYCHIATRIC COSTS, 1957-1961, BY FAMILY STATUS AND MEMBERSHIP HISTORY,  
M.S.A. MEMBERS RESIDING IN METROPOLITAN VANCOUVER, 1957

Marital Status Membership		All N = 100%	Under \$100	\$100 - \$199	\$200 +
			%	%	%
Married male subscriber	Total.....	169	60	22	18
	Continuous pre 1955 .....	52	56	25	19
	Continuous since 1955 .....	38	50	26	24
	Not continuous .....	79	68	18	14
Married female dependent	Total.....	279	57	22	21
	Continuous pre 1955 .....	112	55	25	21
	Continuous since 1955 .....	56	48	21	30
	Not continuous .....	111	65	19	16

TABLE 17-10  
PSYCHIATRIC COSTS 1957-1961, BY REFERRAL SOURCE AND MEMBERSHIP STATUS,  
M.S.A. MEMBERS RESIDING IN METROPOLITAN VANCOUVER, 1957

Referral Source	Membership Status Dec. 31, 1961	All N = 100%	Under \$100	\$100-\$199	\$200 +
			%	%	%
ALL REFERRALS...	ALL	608	60	20	20
	Active Dec. 31/61	329	54	23	23
	Not active Dec. 31/61	279	66	18	17
General practitioner..	Total	463	63	19	18
	Active Dec. 31/61	255	56	23	21
	Not active Dec. 31/61	208	71	14	15
Specialist .....	Total	145	50	24	26
	Active Dec. 31/61	74	49	22	30
	Not active Dec. 31/61	71	51	27	23

### *Psychiatric Costs by Source of Referral*

Among patients with continuous membership, a greater proportion of those referred by a specialist (30 per cent) had costs over \$200 than did those referred by general practitioners (21 per cent). It is not possible to differentiate whether specialists referred patients with more severe illness than did general practitioners, or whether the general practitioner provided continuing care subsequent to consultation.

### *Psychiatric Costs for Patients of Individual Psychiatrists*

There was considerable variation among the psychiatrists in the costs for their patients. The proportion of patients with costs over \$200 ranged from 7-38 per cent for the individual psychiatrists. One psychiatrist who saw 36 patients had 8 per cent of his patients with more than \$200 of psychiatric care, while another with 39 consultations had 38 per cent of his patients receive more than \$200 of psychotherapy. Whether this reflects differences among psychiatrists in philosophy regarding type and duration of psychotherapy, or differences in their referral sources, is not known.

**TABLE 17-11**  
DISTRIBUTION OF PSYCHIATRIC COSTS 1957-1961, BY PSYCHIATRIST,  
M.S.A. MEMBERS RESIDING IN METROPOLITAN VANCOUVER, 1957

Psychiatrist	Total Number of Patients N= 100%	Patients with Psychiatric Costs		
		Under \$100	\$100 - 199	\$200 +
		%	%	%
No. 1 .....	64	56	16	28
2 .....	63	67	17	16
3 .....	62	47	27	26
4 .....	55	69	18	13
5 .....	53	62	25	13
6 .....	47	64	23	13
7 .....	41	42	42	17
8 .....	40	53	28	20
9 .....	39	41	21	38
10 .....	37	62	19	19
11 .....	36	92	—	8
12 .....	34	47	15	38
13 .....	15	93	—	7
14 .....	12	50	25	25
15 .....	10	80	10	10
All	608	60	20	20

### *Costs of Psychiatric Care among Family Members*

Psychiatric illness is not restricted to the individual, but is related to psychiatric disability in other members of the family.<sup>20</sup> Among the study-population, 10 of the 608 patients were related, i.e., there were three spouses, two

<sup>20</sup>Longitudinal data from family records of a prepaid medical care plan were used to investigate the influence of minor psychiatric illness in the parent upon the health of the child. "An excessive incidence of all types of illness was found among children of psychoneurotic mothers; however, when correction was attempted for differences in the utilization of physicians' services, the only certain excess was that of behavioural and psychosomatic disorders." Buck, Carol W., and Laughton, Katherine B., Family patterns of illness: The effect of psychoneurosis in the parent upon illness in the child. *Acta psychiat. scand.* 34:165-175, 1959.



children and five parents who represented five subscribers. Another 19 of the patients seen during 1957 had 21 collaterals or relatives who were seen in other years by psychiatrists, three collaterals during 1955 and 1956, and 18 collaterals during 1958-1961.

The psychiatric costs described in this study represent the costs for the 608 individual patients who were first seen during 1957. The psychiatric costs for the 21 collaterals of 19 patients who were seen in other years are included in the total medical expenses of the subscriber, but not in the psychiatric costs of the original patient; these costs for collaterals totalled \$723 during 1955-1956, and \$3,832 during 1958-1961.

### Utilization of Medical Services by Families of Psychiatric Patients

Patients and families of patients with psychiatric illnesses tend to visit physicians more frequently and to have above average utilization of radiological examination, specialist consultations, surgery, office visits, and hospitalization. This has been demonstrated among members of Group Health Insurance, New York (Appendix 17-1).

#### *Over-all Comparison of Medical Costs*

The extent of such differences was studied for adult patients and controls with continuous membership between 1955 and 1961. These expenditures include the costs for the families of subscribers in the control group, and in the patient group.

The demographic composition of these two groups differs in that the patient group includes a higher proportion of married subscribers (94 per cent against 87 per cent), a higher proportion of married subscribers below the age of 45 (65 per cent against 49 per cent), and a higher proportion of married persons with dependent children (83 per cent against 62 per cent).

The mean expenditures during the two years prior to psychiatric consultation, 1955-1956, were \$187 for the families of patients (N=179) and \$126 for those of controls (N=225). This difference may have been due to the larger number of members represented by the families of patients, or the fact that the patient group was selected on the basis of having visited a physician during 1957 and having been referred to a specialist.<sup>21</sup> One would expect that the previous medical costs of patients seeing physicians during a particular year would be higher than a random group of controls, since the random group of controls would have an estimated 40 per cent of individuals who had not visited a physician during the particular year, and who would have had a "below average" utilization of physician services in the previous two years.<sup>22,23</sup> Finally

<sup>21</sup>In 1959 M.S.A. received no claims for 26 per cent of its employee-members, and none for 50 per cent of the members' dependents.

<sup>22</sup>Each year it is found that 4% of the HIP members account for 25% of the total volume of physician services and that 12% account for 50% of all services...when groups of individuals are followed for several years, the average experience of a group that initially has a high utilization decreases somewhat but remains comparatively high... To what extent does the group of persistent high utilizers consist of the chronically ill, those subject to repeated attacks of minor illnesses, the anxious and dependent?" "...persons in the Plan for a comparatively long time were more likely to continue as high utilizers than were more recent enrollees." Densen, P. M., et al., Concerning high and low utilizers of service in a medical care plan, and the persistence of utilization levels over a three-year period. *Milbank meml. Fund q.* 37:217-250, 1959.

<sup>23</sup>"In general, the data point to an increased liability to medically treated illness among those who were ill from some other cause in a previous month..." Smiley, J. R., et. al., A short-term longitudinal morbidity investigation. *Milbank meml. Fund q.* 33:213-229, 1955.

there is the possibility of higher utilization of physician services of patients prior to referral to a psychiatrist.

*Comparison of Medical Costs of Matched Groups, 1955-56 and 1960-61*

These difficulties in interpretation were reduced by selecting a sub-group of patients and controls with similar demographic characteristics, and deleting controls who had less than \$9 expended by the Plan during 1957.

The patient sub-group consisted of dependent wives who had consulted psychiatrists during 1957, whose husbands were below the age of 45, and who had 1 or 2 children below the age of 18 in 1957. From the control group with the same demographic characteristics matches were made on the basis of having the same membership history.

TABLE 17-12  
M.S.A EXPENDITURES, 1955-56 AND 1960-61,  
MATCHED<sup>1</sup> GROUPS OF 31 FAMILIES

	Families with Wives who had Attended Psychiatrist in 1957	Control Families who had over \$9 of Medical Services during 1957	Difference
1955-1956	\$191	\$ 92	\$99 ± 37
1960-1961	248	230	18 ± 45

<sup>1</sup>M.S.A. subscribers with employee husband below 45 years, 1-2 children below 18 in 1957 of similar length of enrolment before 1955, matched for number of children and enrolment.

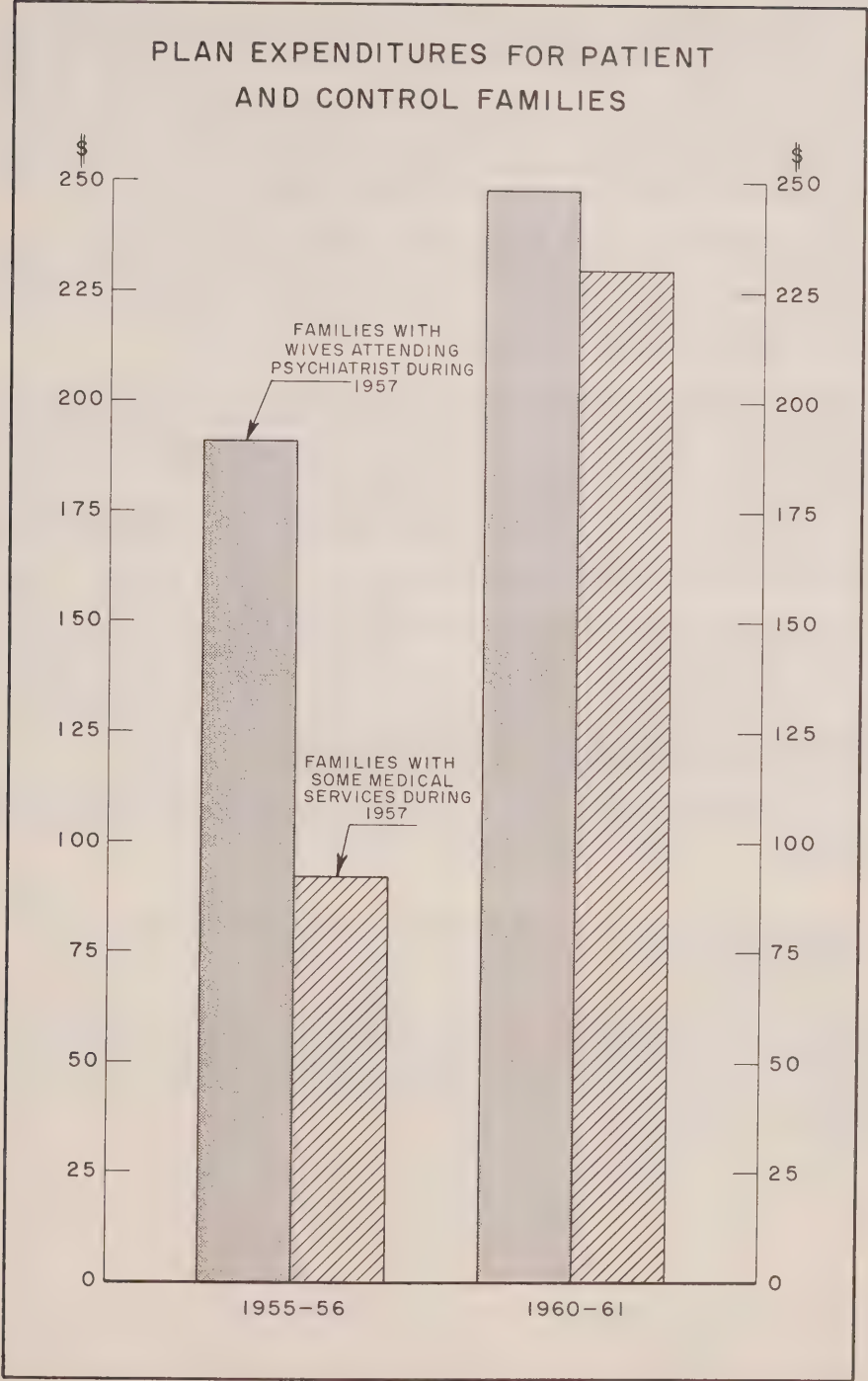
For the two years prior to psychiatric consultation the patients' families had an average medical expenditure double that of the controls, \$191—against \$92. The mean difference was \$99±\$37 ( $t=2.7$ ,  $df=30$ ,  $p=0.01$ ). Thus, the families of patients seeing psychiatrists during 1957 had medical costs during the two previous years which were significantly higher than those of control families for whom some physicians had been seen during 1957.

The Plan expenditures for the two family groups of 31 subscribers were compared for the years 1960-1961. (The number of dependent children in each group at the end of 1961 was not known.) The mean expenditures were \$248 for the families of patients and \$230 for the families of controls. The mean difference was \$18±\$45 and was not statistically significant. The expenditures of the families of patients were higher but not significantly different from those of controls during 1960-1961.<sup>24</sup>

It is not possible to "prove" that this reduction of increased medical expenditure was *caused* by the psychiatrist, since evidence from a different type of experimental design would be necessary, namely from a formal clinical trial, or control group of patients requiring but not receiving psychiatric care.

<sup>24</sup> The higher expenditures of controls in 1960-1961 against 1955-1956 are in part due to increases in Fee Schedule rates and decreases in deductions for administrative expense, as well as increased utilization.

FIGURE 17-4



## Conclusions

(i) The annual rate of referral for psychiatric consultation was estimated as 0.4 per cent for adult members. Demographic differences in consultation rates were marked. Higher rates were found in wives than husbands, younger members than older, younger parents with children than without, and working wives than non-working wives. Psychiatric consultation was *not* more frequent among single employees than married. Recently enrolled members did not have higher consultation rates than members of longer duration.

(ii) Cancellation of Plan membership, which is one indication of occupational instability, was more frequent in patients than controls. Patients, whose membership in the Plan was cancelled, were less likely to be reinstated than controls. Employment stability was reduced not only in employed patients, but among the employed husbands of patients.

(iii) One-sixth of patients, eligible for over four years of psychiatric care, were not seen after consultation. Less than one-twelfth of the patients were hospitalized. The mean psychiatrists' cost of those hospitalized members, with continuous membership over four years, was \$194.

Continuity of psychiatrists' care was more frequent among patients hospitalized in psychiatric units of general hospitals than for those hospitalized at the provincial psychiatric hospital.

(iv) Nearly one-half of all patients were not seen beyond one month. Among patients with continuous membership, one-half were seen longer than six months, and their median costs were under \$200. Mean psychiatric costs for patients with continuous membership were \$136. Less than one-tenth of all patients cost the Plan more than \$300 for psychiatric care. Costs were higher for single females, and for patients referred by specialists.

(v) There was wide variation in costs among psychiatrists. The proportion of patients with costs over \$200 ranged from 7 to 39 per cent for the individual psychiatrists.

(vi) Less than 5 per cent of the patients seen had other family members receiving psychiatric care.

(vii) Medical costs for families of patients were double those for the families of controls during the two-year period prior to the year of psychiatric consultation. In the period three to four years subsequent to the year of psychiatric consultation the family medical costs of patients were not significantly higher than those for controls.



## EXPERIENCE WITH PSYCHIATRIC ILLNESS IN THREE OTHER CANADIAN INSURANCE PLANS

This chapter describes various experiences with psychiatric illness in three other Canadian insurance plans. Attempts are made to answer questions relating to the nature of excess medical expenditures in the period preceding psychiatric consultation, the recognition of psychiatric illness by family physicians, trends in the utilization of insured psychiatric care, and to estimate the amount of psychiatrists' care which might be utilized in the future.

### CREDIT UNION AND CO-OPERATIVE HEALTH SERVICES SOCIETY, VANCOUVER

#### Introduction

##### *Purpose of Study*

The objective of this analysis was to determine the nature of the increased utilization of medical services during the period preceding psychiatric consultation. In Chapter 17 medical costs had been considered for the family-unit rather than for the patient. No details had been studied of the types of medical services or the kind of diagnoses made by the family physicians.

##### *Description of Plan*

Credit Union and Co-operative Health Services Society (C. U. & C.) is a prepaid medical insurance plan which is approved by the Canadian Medical Association, B.C. Division. Physicians' payment is based on the fee-schedule prepared by the Canadian Medical Association, B.C. Division. Membership in C. U. & C. is available to individuals or any group of persons in British Columbia. The agreement may be made with an employer on behalf of his employees, with a union or with duly elected or appointed representatives of a group of people. A minimum of 3 persons is required to form a group, and for groups numbering less than ten, 100 per cent participation of eligible members is required. Where there are more than ten persons in the group, 75 per cent participation of eligible members is required. In 1962, there were 77,000 members enrolled through group coverage.

##### *Costs of Psychiatrists' Care*

During the 12 months ending December 15, 1962, persons with group membership were eligible for up to 15 hours of psychotherapy. Of the total expenditure of \$2,559,000, 1.8 per cent was paid to psychiatrists in private practice. Less than 2.5 per cent of the psychiatrists' costs was for hospital care.

## Method

C.U. & C. personnel<sup>1</sup> were asked for the original physician statements submitted during the period January 1, 1960—November 30, 1962, for a patient and a control group of 40 married women. Married women were selected since they form the major portion of private psychiatric practice. The patient group was selected from those members receiving psychotherapy during October–November 1962, who had enrolled in the Plan before January 1, 1960. These patients were being seen by various psychiatrists in Metropolitan Vancouver and Victoria. The control group was chosen from the membership list at December 1, 1962, on the basis of being the married woman whose enrolment date was closest to that of the patient. Both the patient and control groups included members residing throughout the Province.

The initial groups were made more homogeneous for the purpose of comparing their utilization of medical services. Six patients and eight controls, who were born before 1910, were deleted as well as one patient with interrupted membership during 1960–61, and four patients who had begun psychiatric care before 1962. Three controls were randomly selected and deleted, to result in two groups of 29 patients and controls. The composition of these two groups did not differ significantly in terms of decade of birth or number of dependent children at the start of 1960.

## Medical Costs of Psychiatric Patients during the Two Years Preceding Psychiatric Consultation

### *Distribution of Costs*

Each of the patients and controls in the study population had visited a physician during 1962. Four patients and one control had not visited a physician during the period 1960–1961.

TABLE 18-1

TYPE AND MEAN COST OF PHYSICIAN SERVICES, 1960-61,  
SAMPLE OF C.U. & C. MARRIED FEMALE MEMBERS

	Psychiatric Patients	Controls
	N = 29	N = 29
Total .....	\$106.90	\$80.22
<i>Hospital care:</i>		
Pregnancy .....	6.21	28.72
Other .....	18.97	6.02
<i>Non-hospital care:</i>		
Office and home visits, specialist consultation, laboratory .....	81.72	45.48

The statements submitted by physicians included information on the date, nature, and costs of the services, and the diagnosis. These data were analyzed by the author. The costs of hospital care for pregnancy were separated from other hospital care. The remaining costs included the costs of office and home visits, consultation by specialists and out-patient laboratory examinations.

<sup>1</sup>The full co-operation of Mr. A. H. Corsbie (President) is acknowledged.

The patients had a lower number of pregnancies and therefore lower costs for pregnancy than the controls. The mean costs of hospital care for other conditions were three times higher for patients, and medical costs outside hospital were 80 per cent higher.

#### *Costs of Non-Hospital Care*

In order to estimate the statistical significance of the difference in the costs of ambulant care, the patients and controls were matched on the basis of age. No matched pairs were more than 3 years apart. The differences in the costs of out-patient care of the matched pairs and the mean and standard error of that difference were calculated. The mean difference of \$36.24 in the costs of out-patient care was statistically significant ( $t=2.1$ ,  $df=27$ ,  $p<.01$ ).

During the two-year period prior to psychiatric consultation, the costs for non-hospital care by physicians and for laboratory examinations were on the average \$36 or 80 per cent higher for married women receiving psychiatric treatment than for a control group.

#### *Radiology*

Eleven controls had X-ray examinations costing a total of \$240 during the two-year period. For the 29 women in the control group, this represented a mean cost of \$8.30. Fourteen of the patients had X-ray examinations costing \$370 during the two-year period. For the 29 patients this represented a mean cost of \$12.80. On the average, more of the psychiatric patients had X-ray examinations, and the mean cost per examination was higher.

#### *Medical Care in Hospital*

Two of the controls were hospitalized during the two-year period; one patient for paroxysmal tachycardia, and another for surgical removal of a lipoma. C.U. & C. expenditures for medical care during these hospitalizations totalled \$193.

Four of the 29 patients were hospitalized. The recorded diagnoses were "back injury", hemorrhoidectomy, "surgical incision of a lump in the breast", and the fourth patient (aged 24) had a cholecystectomy. The Plan expenditures totalled \$555.

#### *Pregnancy*

The women of each group were of similar ages and had a similar number of children under the age of 18 at the beginning of 1960. During 1960-1961 two of the patients and nine of the controls were recorded as being pregnant.<sup>2</sup>

Because of the small sample size the proportion of women recorded as pregnant during 1960-1961 is not significantly different in the two groups. However, this relationship deserves further study to determine whether in larger samples the difference in fertility persists. Interpretation of such differences would include considerations of factors in the psychological and social environment, the recognition of psychiatric disability and the referral process. Is it more feasible for a woman without infants to attend psychiatrists? Does

<sup>2</sup>One of the pregnant controls was recorded as having an acute anxiety state 8 months prior to delivery.



motherhood reduce psychiatric symptomatology? Does anxiety inhibit the physiological processes involved in conception, or do wives attending psychiatrists have such family constellations and relationships that induce them to avoid pregnancy?

### **Recognition of Psychiatric Illness by Family Physicians**

#### *Diagnoses Recorded by Family Physicians prior to Psychiatric Referral*

The diagnoses recorded by family physicians during the two years prior to the year of psychiatric referral were examined. Definite diagnoses of psychiatric illnesses had been made for nine of the 29 patients.<sup>3</sup> Psychiatric symptoms had been recorded for five other women, and hypothyroidism for another three. The remaining 12 had no recorded indication of psychiatric disability.

The interval between the recording of a psychiatric diagnosis by the family physician and the time of psychiatric consultation ranged from 3-31 months, with a median of 23 months.

Altogether four of the psychiatric patients were diagnosed as hypothyroid. None of the 29 controls were diagnosed as hypothyroid during the two-year period.

Of the remaining 12 patients four were not recorded as having seen a physician during 1960-1961. The diagnoses made by the psychiatrist in 1962 for these four patients were:

- Anxiety state;
- Anxiety reaction;
- Depressive reaction; and
- Neurotic depressive reaction.

Among the eight patients who had seen a physician during 1960-1961, but for whom no diagnoses of psychiatric illnesses or symptoms, or hypothyroidism had been recorded, the diagnoses made subsequently by psychiatrists were:

- Depressive reaction;
- Tension state;
- Anxiety state;
- Mixed anxiety and depression;
- Adult situational reaction with depression;
- Severe depressive reaction;
- Recurrent depressive reaction; and
- Depressive reaction.

#### *Frequency of Recorded Psychiatric Illness among Married Women*

The diagnoses for the 29 women in the "control" group were similarly analyzed. Definite diagnoses of psychiatric illnesses were recorded for six controls: tension state, emotional crises; anxiety neurosis; fibrocystic breast; anxiety, chest pain NYD; tension state; tension syndrome; acute anxiety state.

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<sup>3</sup>For the 4 patients deleted from the original study because of psychiatric consultation before 1962, two had had prior psychiatric diagnoses recorded by their family physician within 1 and 19 months respectively of psychiatric consultation. The third had a diagnosis of "hyperthyroidism" 20 months earlier, and the fourth was diagnosed as "chronic fatigue" 22 months earlier.



TABLE 18-2  
DIAGNOSES RECORDED BY FAMILY PHYSICIAN PRIOR TO PSYCHIATRIC CONSULTATION, SAMPLE OF C.U. & C. MEMBERS, 1962

Diagnoses Recorded by Family Physician for Office Visit during 1960-61	Diagnoses Made by Psychiatrist on Initial Consultation during 1962	Interval between Diagnoses (months)
<i>Definite diagnosis of psychiatric illness</i>		
Neurosis .....	Obsessive-compulsive neurosis .....	31
Stress syndrome .....	Recurrent depressive reaction .....	31
Cephalalgia; Psychoneurosis .....	Compulsive neurosis with somatization .....	27
Recurrent tension state .....	Compulsive neurosis with depression .....	23
Anxiety state .....	Psychophysiological reaction; Frigidity .....	15
Tension state .....	Anxiety .....	8
Hysteria .....	Sociopathic personality with other neurotic manifestations .....	8
Functional dyspepsia; Chronic tension state .....	Neurotic depression .....	8
Depression; Cervical erosion .....	Acute situational reaction, depressive .....	3
<i>Diagnoses indicating recognition of psychiatric symptoms</i>		
Sleepless; very tense .....	Schizoid personality; Neurotic depressive reaction .....	27
Functional hyperhidrosis .....	Neurotic depression .....	27
Functional chest pain .....	Affective reaction .....	25
Hyperventilation syndrome .....	Emotionally unstable .....	12
Nervous tension; Neurodermatitis; Hypothyroidism .....	Acute anxiety reaction .....	11
<i>Diagnoses of Hypothyroidism</i>		
Hypothyroid .....	Climacteric depression .....	27
Hypothyroid .....	Psychoneurotic depressive reaction .....	20
Possible hypothyroidism .....	Adult situational reaction .....	6

An additional three patients had diagnoses recorded of: tiredness and extrasystoles; neurodermatitis; and eczema.

It is emphasized that this group of 29 married women were randomly selected,<sup>4</sup> and the diagnoses were those recorded by the physician over a two-year period. It is felt that the number of patients recorded as having psychiatric illness is less than the number recognized by the physician.

On the basis of this randomly selected sample, it is estimated that one-fifth (C.L.<sub>.95</sub>=8-40%) of married women (below the age of 51, with over two years of continuous membership in the Plan) were diagnosed by family physicians as having some definite psychiatric illness during a two-year period. This does not necessarily indicate that this is the proportion requiring care by psychiatrists, but it is felt to be a minimum estimate of the high frequency of emotional or psychiatric illness.<sup>5</sup>

### *The Care of Psychiatric Illness by Family Physicians*

It is evident that family physicians are not unaware of emotional or psychological problems. On the other hand it is probably true that Clute's observation is valid.<sup>6</sup>

"Extremely rare was the physician who attempted to gain a clear picture of the particular situation and to explore the underlying causes in more than the most superficial way. Therapy comprised sedative drugs and brief direct advice."

This "superficial" handling is reflected by the higher costs among psychiatric patients for physician visits and laboratory procedures. Although not all patients with psychiatric symptoms require the immediate (or even eventual) care of a psychiatrist, there is a considerable delay between the recognition of a psychiatric illness and the referral to a psychiatrist. In the interval, the patient is likely to be over-utilizing the services of physicians, laboratories and pharmacists.<sup>7,8</sup> The net costs of psychiatric care are the gross costs for psychiatric care minus the reduction in the amount previously spent in over-utilized health services.

<sup>4</sup>Of the 11 controls excluded from the study-population three had recorded diagnoses of psychiatric syndromes, and one had psychiatric symptoms.

<sup>5</sup>An unpublished study of Windsor Medical Service subscribers by Hobbs, G. E., and Buck, Carol, was cited as demonstrating that nearly one-fifth of the members had illnesses given a definite psychiatric diagnosis during a five-year period.

LeRiche, H., *A Sample Study on the Participants of a Canadian Pre-Payment Medical Care Plan*, Toronto: Physicians Services Inc., 1957.

<sup>6</sup>Clute, K. F., *The General Practitioner*, Toronto: University of Toronto Press, 1962, p. 306.

<sup>7</sup>There is some evidence from a pilot survey, "that the higher the price of a tranquilizer the more it is prescribed." Wilson, C. W. M., et al., *The assessment of prescribing: A study in operational research*, pp. 173-207 in *Problems and Progress in Medical Care*, McLachlan, G. (Editor), published for the Nuffield Provincial Hospitals Trust by the Oxford University Press, 1964.

<sup>8</sup>Logan describes a recent British survey of 19 practices, with a combined population of 45,000 patients, over two sample weeks. Functional and nervous complaints formed the leading diagnostic groups; 9% of the total 9,405 patient visits; and over 11% of the patients receiving prescriptions.

There was also a high positive correlation (correlation coefficient + 0.68) between the number of patients and the average cost of prescribing for psychoneurosis among the individual physicians. Logan, R.F.L., *Studies in the spectrum of medical care*, pp. 3-51 in *Problems and Progress in Medical Care*, op. cit.

These over-utilized health services of frequent physician-visits, laboratory examinations and drugs are the masked costs of psychiatric illness, and are of little specific help.

Clute notes:

"It appeared that, apart from advice about physical matters, a clergyman or a lawyer, if he had been as well disposed as was the doctor and if he had as many years of experience with human problems, would have been able to counsel as effectively as most of the practitioners, and some psychiatric social workers are probably a good deal more effective at this."<sup>9</sup>

### Conclusions

(i) The medical costs among married women receiving psychiatrists' care were higher than a control group during the two years preceding initial consultation.

(ii) These higher costs were due to increased amounts of hospitalization, radiology and laboratory examinations.

(iii) Nearly one-half of the women referred to a psychiatrist had been given a definite diagnosis of psychiatric illness or symptoms some time preceding referral. The median interval for such diagnoses was 23 months.

(iv) One-fifth of a control group of married women had been given definite diagnoses of psychiatric illness by their family physicians during a two-year interval.

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<sup>9</sup> Clute, K. F., *op. cit.*, p. 306.

## MEDICAL SERVICES (ALBERTA) INC.

### Introduction

Medical Services (Alberta) Incorporated (MS(A)I), a member plan of Trans-Canada Medical Plans, provides prepaid health insurance in Alberta. Group membership was available to employees (and employers) of firms with three or more employees and to the membership of associations such as the Farmers' Union of Alberta, rural electrification systems, rural telephone mutuals, members of municipal hospital districts. Individual membership was also possible. During 1961, 38 per cent of Alberta's population were members of MS(A)I. Higher proportions of enrolment were found in households within Metropolitan Edmonton (57 per cent) and Calgary (54 per cent).

MS(A)I had led other members of Trans-Canada Medical Plans in progressively extending its benefits for psychiatric care. Special tabulations on various aspects of MS(A)I's experience, requested by the author, were supplied through the full co-operation of W. G. McPhail, M.D. (Medical Director). The following analyses are based in large part upon these tabulations.

### Payment for Psychiatrists' Care

Progress in extending psychiatric benefits were described as follows:

"In January, 1958, the services of psychiatrists became available as a benefit to the entire membership of the Corporation. During 1958 and 1959 the Schedule of Fees of the College of Physicians and Surgeons of Alberta (on which MS(A)I bases its payments) imposed a ceiling of \$200.00 per course of psychotherapy treatment, and this undoubtedly had the effect of keeping MS(A)I costs down—although presumably the psychiatrists billed the subscribers directly for costs in excess of \$200.00.

"In January 1960, the \$200 limit was removed from the Schedule and the fee listed for psychotherapy was increased from \$12 per hour to \$15 per hour.

"At the present time . . . there is no fixed financial limitation governing this benefit; the subscribing member is required to obtain a "progress report" from his attending psychiatrist when cost exceeds \$500. The report is mailed by the psychiatrist direct to MS(A)I where it may be studied by a psychiatric consultant to determine if further expenditures by the Corporation appear justified."<sup>10</sup>

There is an informal arrangement whereby patients are advised by the psychiatrist that amounts over \$1,000 per contract year will be the patient's personal responsibility.<sup>11</sup>

In contrast with M.S.A., payment was made for continuing psychotherapy for self-referred patients, that is, those *not referred* by a physician.<sup>12</sup> For initial consultations of referred patients, psychiatrists were paid at the rate of \$25 if not followed by treatment, and \$15 if followed by treatment. For first visits by unreferred patients psychiatrists were paid at the rate of \$15. Subsequent office

<sup>10</sup>Medical Services (Alberta) Inc., *A Study of Certain Aspects of Psychiatric Benefits as Underwritten by Medical Services (Alberta) Incorporated*, tabulations prepared for the Royal Commission on Health Services, November 1962.

<sup>11</sup>Appendix 16-1.

<sup>12</sup>Members enrolled on an individual basis had a one-year waiting period for psychotherapy. A patient receiving continuing psychotherapy could enrol as an individual member, and after a waiting period of 1 year have up to \$1,000 per year paid by MS(A)I for psychotherapy.



visits for psychotherapy were paid at the rate of \$15 per hour for both referred and unreferred patients.

### **Payment to Family Physicians for the Care of Psychiatric Illnesses**

During 1960, 33.12 services per 1,000 member-years were provided by psychiatrists for members of MS(A)I. This represented a total of 14,440 services. In addition, another 52,000 services for psychiatric illnesses were provided by physicians who were not psychiatrists. These 52,000 services are a minimum number based only on those services for which the physician had recorded a definite psychiatric diagnosis on his statement submitted to the Plan.

Only one-fifth of the services for diagnoses recorded as psychiatric illnesses was made by psychiatrists. Payment to psychiatrists was 45 per cent of the expenditures for services for psychiatric diagnoses. The mean cost per service by a psychiatrist was \$11.40, and \$3.80 by a non-psychiatrist. Psychiatrists' services averaged 45 minutes per visit for psychotherapy and included some 2,700 consultations.

The average cost per psychiatrist's service was three times that for the non-psychiatrist. If the average office visit for general practitioners lasted 15 minutes, the cost per hour was not higher for psychiatrists than for general practitioners. If the average visit for general practitioners lasted less than 15 minutes, the psychiatrists would have been paid at a lower rate.

### **Costs of Medical Care for Psychoneuroses**

For the latter half of 1961, data were available on the costs for psychoneurosis among various demographic groups<sup>13</sup> based on diagnoses recorded on physicians' statements submitted to MS(A)I. Costs were higher for females than for males, and for both sexes were highest in the 25-44 age group. For members aged 25-44 the Plan expenditure for diagnoses recorded as psychoneurosis were \$1.87 per member-year for females and \$1.06 for males. These costs included services for psychoneuroses by both psychiatrists and non-psychiatrists. Because of differences in the total medical costs for males and females, the proportion of expenditure for psychoneuroses was similar in each group, 5.0 per cent for females and 5.6 per cent for males.

### **Trends in Utilization of Psychiatrists' Care, 1958-1962**

The rates in Table 18-3 are based on the entire Alberta membership and would be higher if based on a denominator of the members living in the metropolitan areas where private psychiatrists were concentrated.<sup>14</sup>

<sup>13</sup>Medical Services (Alberta) Inc., *A Study of MS(A)I Costs by Diagnosis, by Sex and Age Groupings*, (July 1 to Dec. 31, 1961), tabulations prepared for the Royal Commission on Health Services, November 1962.

<sup>14</sup>In January 1962, there were 18 private psychiatrists in Alberta: 8 in Calgary; 10 in Edmonton, 6 full time, 4 half time.

Alberta Psychiatric Association, brief submitted to the Royal Commission on Health Services, Edmonton, February 1962.

**TABLE 18-3**  
**NUMBER AND COST<sup>1</sup> OF PSYCHIATRISTS' SERVICES, PER THOUSAND**  
**MEMBER-YEARS,<sup>2</sup> 1958-1962,**  
**MEDICAL SERVICES ALBERTA INCORPORATED**

	1958	1959	1960	1961	1962 (6 months)
<i>Initial consultation<sup>3</sup></i>					
Number per 1,000 .....	3.60	5.52	6.12	6.24	7.56
Cost per 1,000.....	\$53.52	\$87.36	\$101.28	\$103.56	\$129.60
<i>Psychotherapy</i>					
Number of services <sup>4</sup> per 1,000 .....	31.20	26.52	21.60	25.32	40.56
Cost per 1,000.....	188.88	204.84	226.44	269.64	404.16
<i>Other treatments<sup>5</sup></i>					
Number per 1,000 .....	7.80	5.40	5.40	3.12	3.12
Cost per 1,000.....	50.88	36.24	36.96	22.20	22.32
<i>All psychiatrists' services</i>					
Total cost per 1,000 member-years.....	293.52	328.56	364.80	395.40	555.84
<i>All MS (A) I expenditures</i>					
Total cost per member-year.....	20.64	22.48	24.85	26.15	—
<i>Psychiatrists' services</i>					
Per cent of all expenditures .....	1.42%	1.46%	1.47%	1.51%	—
<i>Mid-year enrolment</i> (thousands) .....	294	386	436	481	500
<i>Payment for psychotherapy-hour .....</i>	9.75	10.20	13.50	13.50	13.50
<i>Mean duration (minutes)</i> <i>of psychotherapy service .....</i>	37.3	47.5	46.6	47.3	44.3
Ratio= $\frac{\text{Psychotherapy services}}{\text{initial consultations.....}}$	8.67	4.80	3.53	4.06	5.36
Ratio= $\frac{\text{Minutes for psychotherapy}}{\text{consultations.....}}$	323	228	164	192	237
<i>Estimated annual services by psychiatrists</i>					
Psychotherapy hours per year .....	5,700	8,100	7,300	9,600	15,000
Total number of consultations.....	1,060	2,130	2,670	3,000	3,780

<sup>1</sup>Expended by plan.

<sup>2</sup>Represents the equivalent of continuous membership for 1 year by 1,000 members. These rates, based on the entire membership, would be higher for members living in metropolitan areas.

<sup>3</sup>Includes unreferred cases.

<sup>4</sup>Psychotherapy service is one visit of varying duration.

<sup>5</sup>Electrotherapy and miscellaneous procedures.

Source: Medical Services (Alberta) Inc., brief submitted to the Royal Commission on Health Services, Edmonton: February 1962, and *A Study of Certain Aspects of Psychiatric Benefits*, op. cit.

### *Initial Consultation*

The annual rate of psychiatric consultation more than doubled between 1958 and the first half of 1962, 3.6 to 7.6 per 1,000 members.

### *Psychotherapy*

The frequency of office visits for psychotherapy declined from 31.2 in 1958 to 21.6 per 1,000 members-years in 1960 and then increased to 40.6 per 1,000 members by the first half of 1962.

Associated with the initial decline in the frequency of office visits for psychotherapy were two factors: an increase in the enrolment from 294 thousand in 1958 to 436 thousand in 1960; and a change in the average pattern of practice of psychiatrists (which may have been caused by changes in the psychiatrists practising in 1958 or by the addition of more psychiatrists). These changes between 1958 and 1960 included: the mean duration of psychotherapy increasing from 37 minutes to 47 minutes and an increase in the number of consultations from 1 to 2.7 thousand. Between 1958 and the first half of 1962, the total time for psychotherapy increased less than the number of consultations.

An average office visit for psychotherapy lasted about three-quarters of an hour. The average ratio of psychotherapy time per consultation ranged between 164 minutes per consultation to 323. If the period of psychotherapy were becoming prolonged during 1958-1962, one would expect a greater proportion of the psychiatrist's time to have been spent in psychotherapy, thus reducing the amount of time available for consultation. In such a case the ratio of psychotherapy services or minutes to consultations would increase due to the numerator increasing and denominator decreasing. This did not occur.

### *Electrotherapy*

Electrotherapy formed the majority of "other" treatments, which decreased consistently from 7.8 per thousand in 1958 to 3.1 per thousand in 1962.

### *Psychiatrists' Portion of Expenditures*

Despite the marked changes in utilization the psychiatrists' portion of all expenditures changed less than .10 per cent from 1.42 per cent in 1958 to 1.51 per cent in 1961.

Similar findings were reported from the Tennessee Hospital Service Association—

"... although dollar claims for psychiatric care more than doubled over the five years, payments for psychiatric care tended to remain a fairly constant proportion... of total major medical insurance payments."<sup>15</sup>

### **Rate of Initial Psychiatric Consultation and Psychotherapy, 1961-62**

This estimate is based on the experience of a 10 per cent sample of unduplicated members during July 1961-June 1962. The annual frequency of psychiatric consultation among males was 0.6 per cent for all age groups, and between 0.8-1.1 per cent for adults. For females the over-all frequency was 0.9 per cent, and for adults the frequency ranged from 1.0 to 1.4 per cent.

The over-all frequency of males receiving psychotherapy was nearly 0.7 per cent, the highest frequency being 1.4 per cent among those aged 25-44. For females the over-all rate of psychotherapy was 1.1 per cent, the highest frequency being 2.1 per cent for females aged 25-44.

<sup>15</sup>Holen, Arlene, and Brewster, Agnes W., Utilization and costs of psychiatric services under a broad insurance program. *Psychiatric Studies and Projects*, 3(1):1-8, Jan. 1965.

TABLE 18-4  
TYPE AND RATE OF PSYCHIATRISTS' SERVICES PER THOUSAND MEMBERS - PER YEAR, BY AGE AND SEX,  
10 PER CENT SAMPLE OF MS(A)I MEMBERS, JULY 1, 1961 - JUNE 30, 1962

Approximate Age	Male				Female				Total			
	Popu- lation at Risk	Rate per 1,000 Members			Popu- lation at Risk	Rate per 1,000 Members				Costs Per 1,000 Member- Years <sup>4</sup>		
		Initial Cons. 1	Psycho- therapy <sup>2</sup>	"Other" <sup>3</sup>		Initial Cons. 1	Psycho- therapy <sup>2</sup>	"Other" <sup>3</sup>				
0-14 .....	9,372	2.88	1.60	—	\$111.00	8,829	2.03	1.01	—	\$63.12	18,201	\$87.84
15-24 .....	3,152	8.24	6.66	0.31	451.08	3,934	10.67	12.96	0.25	704.28	7,086	591.60
25-44 .....	7,513	7.85	13.97	1.06	861.72	7,912	14.40	20.60	1.64	1,263.12	15,425	1,067.64
45-64 .....	4,370	8.00	7.55	1.37	494.40	4,247	11.77	11.77	2.11	701.16	8,617	596.40
Over 65 .....	1,118	11.62	1.78	—	234.84	1,074	10.74	3.72	—	251.28	2,192	234.00
Total .....	25,525	6.26	6.89	0.58	444.36	25,996	9.03	10.65	0.88	637.44	51,521	541.68

<sup>1</sup> Referred and unreferred initial consultations.

<sup>2</sup> Unduplicated persons.

<sup>3</sup> Largely electrotherapy.

<sup>4</sup> Payments to psychiatrists.

Source: Medical Services (Alberta) Inc., *A Study of Certain Aspects of Psychiatric Benefits*, op. cit.



FIGURE 18-1

RATE OF INITIAL CONSULTATION  
MS(A)1 SAMPLE, 1961-62  
BY AGE GROUP

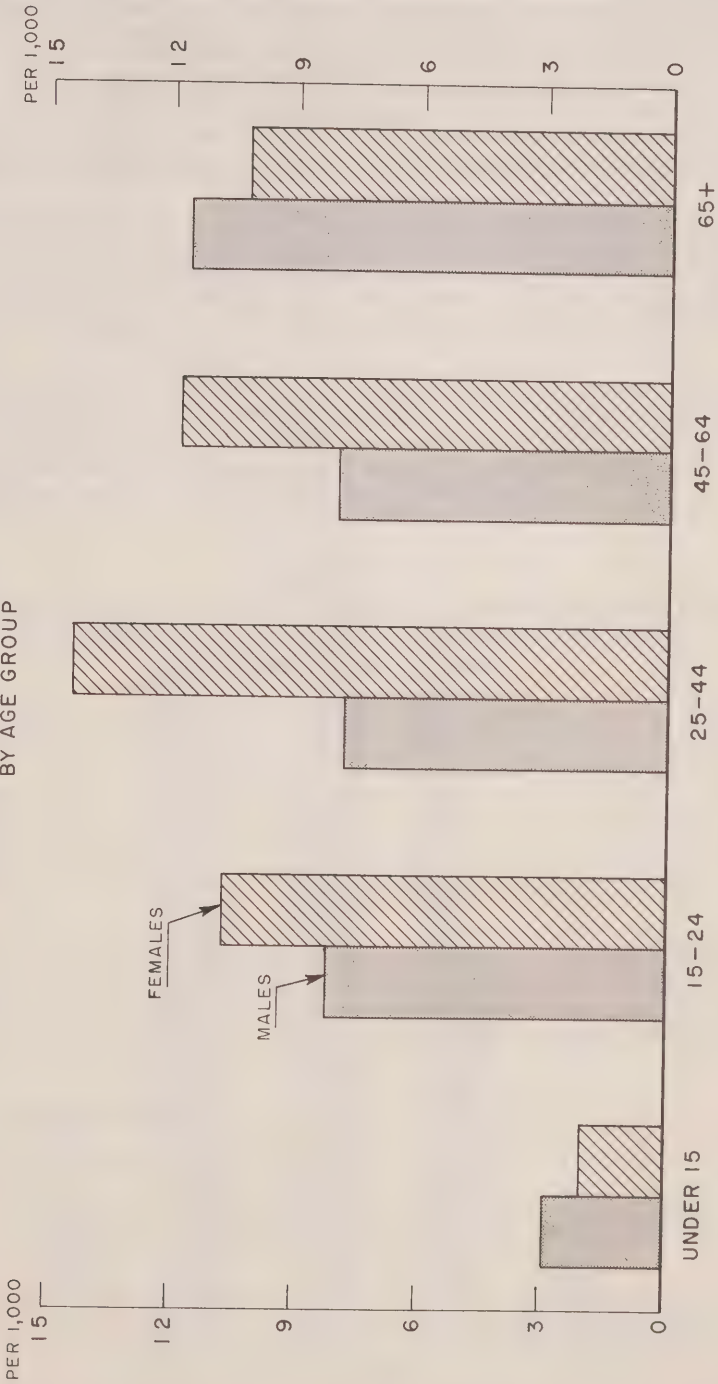
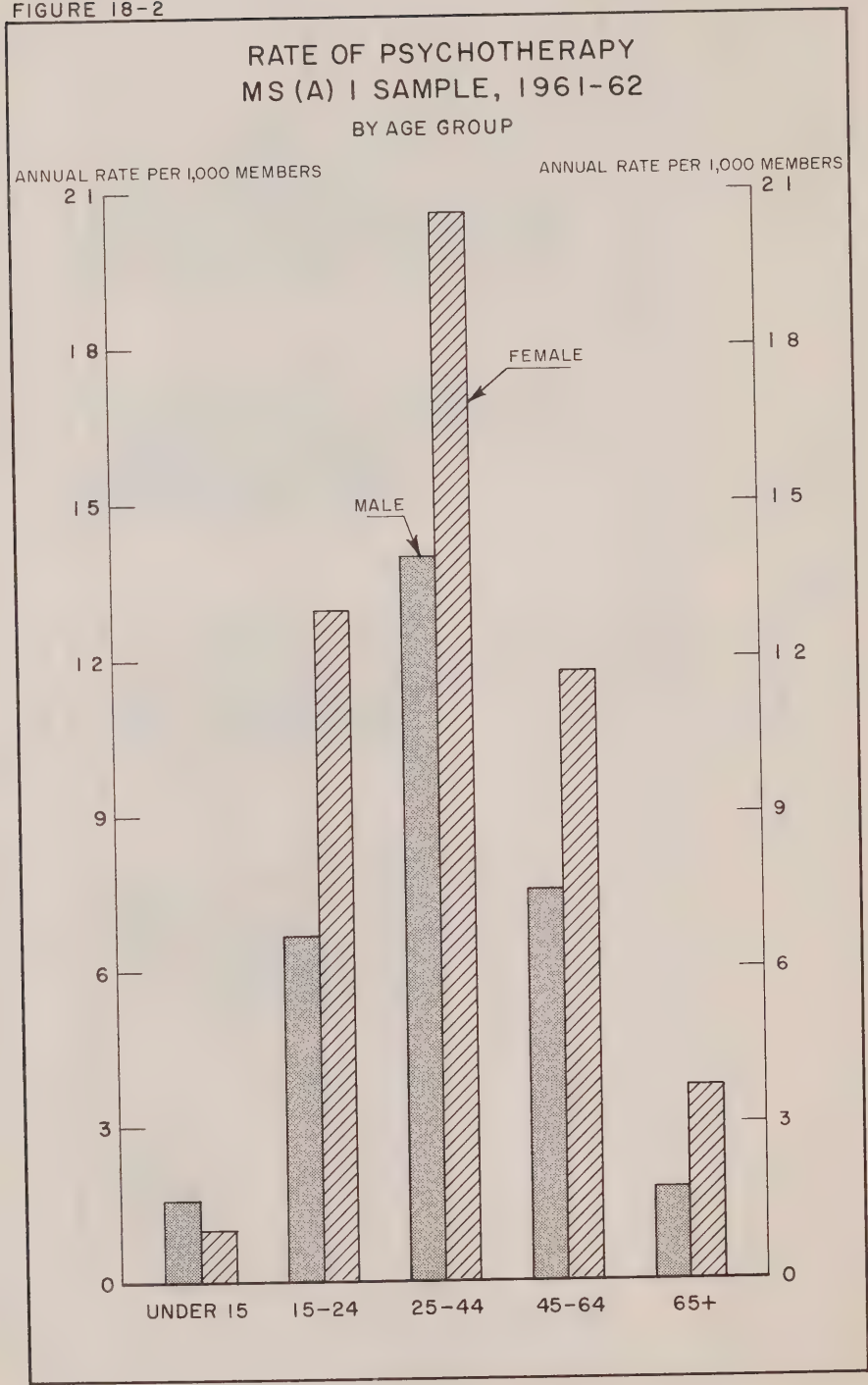


FIGURE 18-2



Rate and Costs of Psychiatrists' Care

While 395 individuals among this 10 per cent sample of the membership received an initial consultation during the year, there were 453 individuals receiving psychotherapy during the year. Some of the patients receiving psychotherapy were continuing in therapy from previous years, while others had begun during the year. On the other hand, not all of the patients receiving an initial consultation during the year continued in psychotherapy.

The proportion of the membership receiving psychotherapy at any time during the year was higher than the proportion receiving an initial consultation. The one year prevalence of psychotherapy by private psychiatrists during the year is estimated as 0.7 per cent for male members and 1.1 per cent for females. Over 2 per cent of females aged 25-44 received psychotherapy during the year.

In some demographic groups more persons received consultations than psychotherapy during the year, while in others the reverse occurred. Minimum estimates of the frequency of attendance at a psychiatrist can be made by using as the numerator for each demographic group the larger number of those receiving initial consultation or psychotherapy during the year.

TABLE 18-5  
MINIMUM ESTIMATE OF RATE OF PSYCHIATRIST ATTENDANCE PER YEAR,  
10 PER CENT SAMPLE OF MS(A)I MEMBERS,  
JULY 1, 1961 - JUNE 30, 1962

	Males	Females	All
Under 15 years.....	0.3%	0.2%	0.2%
15-64 years .....	1.1	1.6	1.4
65 and over.....	1.2	1.1	1.1

Source: Medical Services (Alberta) Inc., *A Study of Certain Aspects of Psychiatric Benefits*, op cit.

The costs for psychiatric care are found in Table 18-4. The over-all costs per member-year were 54¢ and were higher for women (63¢) than men (44¢). Costs were lowest for children (09¢) and highest for those aged 25-44 (\$1.07). Females aged 25-44, who had the highest frequency of consultation and psychotherapy, had the highest costs, \$1.26 per member-year.

Estimate of Future Utilization

Utilization of Psychiatrists' Time, 1962

It is possible to convert the preceding data into a ratio giving the numerical relationship between one psychiatrist and the size of the population to which he provided private psychiatric care.

During the first half of 1962, an annual equivalent of 15 thousand hours of psychotherapy and 3.8 thousand consultations were utilized by a total membership of over 500,000. Assuming that a consultation lasted one hour, this totals 19.3 thousand hours per year. On the basis of a psychiatrist working 40 hours a

week during 50 weeks of the year, MS(A)I members used the equivalent of 10 full-time private psychiatrists for out-patient psychotherapy and initial consultations. Since the patients seen were mainly those living in the metropolitan area, the ratio of psychiatrists to population is estimated as one private psychiatrist to less than 50,000 population.

More detailed analyses may be made by converting the age-sex specific costs of psychiatric care in Table 18-4 into psychiatrists' hours per 1,000 members of various age groups.

**TABLE 18-6**  
UTILIZATION OF PRIVATE PSYCHIATRISTS' TIME, HOURS PER 1,000 MEMBER-YEARS, MS(A)I, 1961-62

All ages.....	40.1 hours
0-14 years.....	6.5 hours
15-24 years.....	43.8 hours
25-44 years.....	79.1 hours
45-64 years.....	44.2 hours
65 + .....	17.3 hours
Males.....	32.9 hours
Females.....	47.2 hours

Source: Table 18-3.

These ratios relate to the amount of private psychiatrists' time utilized for consultation, psychotherapy, and care in psychiatric units of general hospitals. It is noteworthy that the lowest ratios were spent with the young and the aged. The ratio of 6.5 hours per 1,000 children is equivalent to one psychiatrist per 308,000 children which is one-fifteenth the ratio of one child psychiatrist to about 20,000 children recommended by the Committee on Child Psychiatry, Canadian Psychiatric Association.<sup>16</sup> (The amount of additional care available from Alberta psychiatrists in Child Guidance Clinics, etc., is unknown.)

The highest ratio was with members aged 25-44 years, who had 79.1 hours per 1,000. Within this age group, females used 93.6 hours per 1,000 members.

### *Estimate of Future Use*

It is difficult to *predict* the extent of future utilization on the basis of the above data which relate to an insufficient<sup>17,18</sup> number of psychiatrists providing services to a population of unknown<sup>19</sup> size. However, estimates might be made.

<sup>16</sup>Canadian Psychiatric Association, brief submitted to the Royal Commission on Health Services, *op. cit.*, Appendix 15.

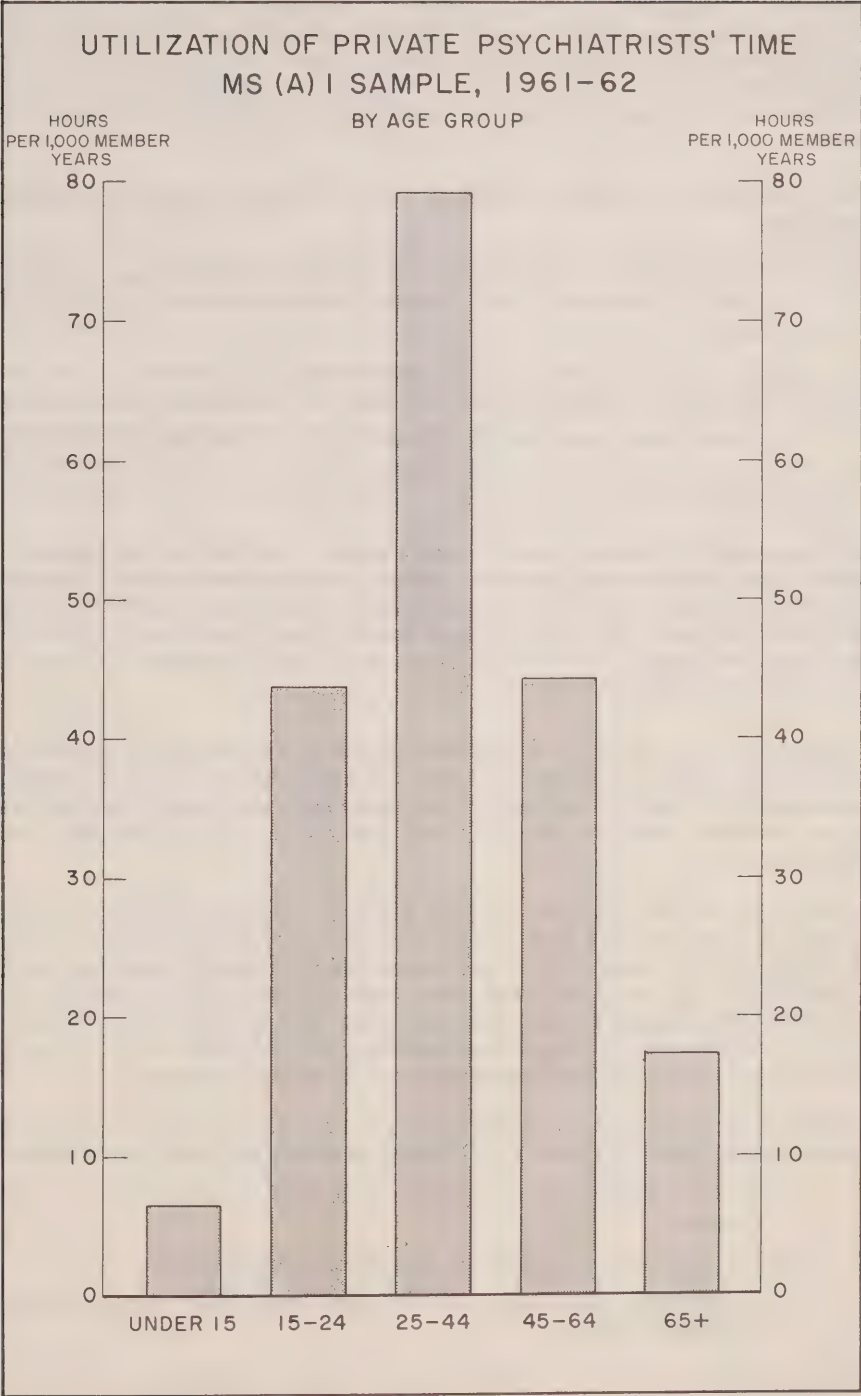
<sup>17</sup>Alberta Division of the Canadian Mental Health Association, brief submitted to the Royal Commission on Health Services, Edmonton, February 1962.

<sup>18</sup>Alberta Psychiatric Association, brief submitted to the Royal Commission on Health Services, Edmonton, February 1962.

<sup>19</sup>The fact that the MS(A)I rates are based on the entire membership, and not only on those living in areas close to Calgary and Edmonton (where the private psychiatrists were) is again emphasized.



FIGURE 18-3



On the basis of a 1961 survey of the geographical distribution<sup>20</sup> of MS(A)I members it is estimated that there were 332 thousand members living within Metropolitan Calgary and Edmonton. If it is assumed that 85 per cent of the psychiatrists' time had been spent with patients from Calgary and Edmonton, it is estimated that an increase of 25 per cent to the utilization shown in Table 18-6 would approximate the utilization of psychiatrists' time by metropolitan area members.

An estimate of future utilization may be based upon the following assumptions:

- The 1961-62 patterns of practice regarding patient load, patterns of practice and referral, and the ratio of consultations to psychotherapy would continue.
- The ratio of psychiatrists to population would double in the future, and become similar in both metropolitan and non-metropolitan areas.
- The estimated over-all utilization would be double that for the age group with the highest utilization during 1961-1962, namely those aged 25-44.

Upon the preceding assumptions one can multiply the ratio of 79 psychiatrist-hours per 1,000 members per year by 125 per cent (correction for metropolitan distribution of psychiatrists being extended to other areas) and 200 per cent (doubling of 1962 ratio of psychiatrists to population in the future). This results in an estimated ratio of about 200 hours per 1,000 members, or about one psychiatrist per 10,000 population.

Attainment of this ratio would be affected by the supply of psychiatrists, which is not likely to reach 1:10,000 by 1971, unless there is additional immigration, increased recruitment of psychiatrists from present medical graduates, or extended provision of specialized psychiatric care by suitably trained family physicians.

This ratio of 200 psychiatrist-hours per 1,000 population would cost \$2.70 per capita at 1962 MS(A)I rates of payment. This should be compared with the 1960 Alberta expenditure of \$7.77 per capita for provincially operated psychiatric institutions. At the end of 1960 there were 2.5 long-stay patients per 1,000 population. The annual mental hospital costs during 1960 were \$2,055 per patient. Therefore, the Province was spending  $2.5 \times \$2,055 = \$5,137$  per 1,000 population for the continuing maintenance of long-stay patients.

These estimated costs for private psychiatrists' care are *gross* costs, and do not consider the possible effects of increased psychiatrists' care on reducing:

- the over-utilization of medical services by patients with psychiatric illnesses;
- the frequency and costs of long-term hospitalization;
- the economic losses produced in families with a member having a psychiatric illness.

<sup>20</sup>Medical Services (Alberta) Inc., brief submitted to the Royal Commission on Health Services, *op. cit.*, Exhibit 7.

## Conclusions

(i) MS(A)I progressively reduced the restrictions on psychiatric care between 1958 to 1962. Payment was made for consultation and psychotherapy of members upon physician- or self-referral. The absolute cost per member-year increased from 29¢ to 56¢, but the psychiatrists' portion of total expenditure increased less, from 1.4 per cent to 1.5 per cent.

(ii) Annual rates of initial consultation (physician and self-referred) reached 0.8 per cent in 1962.

(iii) There was no evidence of a trend to prolong psychotherapy during the period 1958-1962.

(iv) The frequency of electrotherapy decreased between 1958 and 1962.

(v) Psychiatric consultation and psychotherapy were more frequent among females than males. At least 1.1 per cent of adult males and 1.6 per cent of adult females attended a psychiatrist during 1961-62.

(vi) During 1961-62, 40 hours of private psychiatrists' time were used per 1,000 members. Age-specific ratios were lowest with children and the aged.

(vii) It is estimated that future utilization could reach 200 hours per 1,000 members per year. The per capita costs of such care would be less than the 1960 cost for the continuing care of long-stay patients in mental hospitals.

## GROUP SURGICAL-MEDICAL INSURANCE PLAN FOR EMPLOYEES IN PUBLIC SERVICE OF CANADA

This plan has been operated since July 1, 1960, for employees in the Public Service of Canada, dependents of members of the Regular Forces and R.C.M.P. and persons entitled to pensions based on service in the Public Service of Canada. It is underwritten by 26 private insurance companies.

It included a Major Medical Expense Benefit for expenses for "reasonable and customary charges" for services by psychiatrists, as well as for graduate nurses, drugs and medicines. The Plan pays 80 per cent of the eligible expenses which exceed the annual deductible amount of \$50 per family, up to a maximum amount. The maximum amount payable under this Benefit in respect of each insured individual was \$10,000 during that person's lifetime. Benefits were not payable for "services normally rendered without charge."<sup>21</sup>

During a three-month period, May 10 to August 10, 1962, expenditures for psychiatrists' care were tabulated.<sup>22</sup> A total of 579 claims were made for psychiatric care. The average claim was \$116. The benefits paid were 75.1 per cent of the charges and 1.77 per cent of the total expenditures of \$2.6 million by the Plan.

*Although services of psychiatrists were included for this largely urban membership, and a maximum expenditure of \$10,000 was possible, less than 2 per cent of the expenditures were for psychiatric care after two years of operation.*

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<sup>21</sup>This description is from the pamphlet *Your Surgical-Medical Plan*, an explanation of the Group Surgical-Medical Insurance Plan for employees in the Public Service of Canada, revised July 1, 1962.

<sup>22</sup>The author acknowledges the assistance of Mr. J. P. Devenny, Manager, in obtaining this information.



## THE CASE-LOAD OF PSYCHIATRISTS

### Introduction

The high frequency of psychiatric illness in the Canadian population has been detailed in various chapters. The extent to which the need for psychiatrists' care can be met is affected by the supply of psychiatrists and their case-load. The case-load, or number of patients cared for (in consultation or continuing treatment) throughout a year, is related to the ratio of time spent in consultation with new patients to time spent in treatment of continuing patients, and the duration of continuing treatment.

The size of the case-load is affected by the orientation or philosophy of the psychiatrist and factors involved in the referral process. Social and economic factors have marked effects upon the perceptions and attitudes of the patient, his family and physician, the feasibility of initiating psychiatric consultation, and the patient's continuing treatment. The effect of such social and economic factors in selecting the types of patients remaining in private psychiatric care is considerable.<sup>1,2</sup>

From the few local surveys of private psychiatric practice in the United States it is evident that this selective process has markedly affected the numbers and types of patients seen for consultation and psychotherapy, and the duration of care per patient. The purpose of this chapter is to compare some of the United States' surveys with Canadian experience.

### United States' Surveys of Psychiatrists' Case-loads

A sample survey of selected areas, Nov. 1963-Feb. 1964, by the National Institute of Mental Health obtained a 69 per cent response from 81 psychiatrists in private practice in Westchester County, N.Y.; Washington, D.C.; Wisconsin; Kentucky; and Northern California.<sup>3</sup> For the 32 psychiatrists spending 35 or more hours per week in private practice it was estimated that on the average 41 patients per month and 141 per year were seen. Nearly two-thirds

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<sup>1</sup>Hollingshead, A. B., and Redlich, F. C., *Social Class and Mental Illness*, New York: John Wiley, 1958, pp. 213-216.

<sup>2</sup>Richman, A., Psychotherapy, social class, and medical insurance plans. Presented at the Sixth International Congress of Psychotherapy, London, August 24-29, 1964, (in press) *Medical Care*.

<sup>3</sup>Bahn, Anita K., Conwell, Margaret, and Hurley, P., Survey of private psychiatric practice, *Arch. gen. Psychiat.* 12:295-302, 1965.

of these psychiatrists saw fewer than 100 patients per year; and three-eighths saw 30 or more patients per month.

In New Haven, Connecticut, during six months, 42 private psychiatrists saw 359 patients in 1950, a mean of 17 patients per psychiatrist per year.<sup>4</sup>

A Boston survey indicated that 200 private psychiatrists saw a total of 1,800 patients during a year.

"The Boston Mental Health Survey, using a questionnaire technique, estimated that about 1,800 patients are seen annually by the 200 private psychiatrists. As nearly as could be determined, about 36% of these 1,800 came from Boston proper, the rest from the surrounding metropolitan cities and towns. Over half of the patients seen by psychiatrists in community practice lived in four census tracts containing only 3½% of the Boston population. The private psychiatrist, it was concluded, because of the character of the neighbourhoods in these four census areas sees patients of high social economic status. Four out of five of these private patients had a college level of training and two-thirds of them were females. Nearly all were able to pay fully for this treatment."<sup>5</sup>

During November 1951, 235 Massachusetts psychiatrists in various types of practice reported seeing 3,518 private patients. The number ranged from "less than 10 to over 100 patients" per psychiatrist, and averaged 15 patients per psychiatrist per month. Of these 3,518 patients, 585 (17 per cent) were reported as new.<sup>6</sup>

Approximately 1,800 Monroe County (N.Y.) residents, (3.1 per 1,000 population) entered the care of private psychiatrists in 1960.<sup>7</sup> These patients may have received some private psychiatric care prior to October 1, 1959. The number of full- and part-time private psychiatrists reporting case-loads totalled 43. The minimum estimate of patients entering private care was 39 per psychiatrist per year, and it is doubtful that a maximum estimate would exceed 80 new patients per psychiatrist in full-time practice.

In Los Angeles County 76 per cent of the psychiatrists in private practice responded to a questionnaire survey in 1958.<sup>8</sup> In March 1958, 308 psychiatrists were currently seeing a total of 7,382 patients, 6,755 of them individually and 627 in group psychotherapy.

"Almost 40 per cent of the patients in individual therapy were seen once a week; the remaining 60 per cent were divided almost equally among those treated less often than once a week (20.4 per cent), those treated twice a week (21.1 per cent) and those treated three or more times per week (19.0 per cent). Over 90 per cent of the individual treatment sessions last between 45 and 60 minutes, most of these being the 'traditional' 50-minute hour."

<sup>4</sup>Hollingshead A. B., and Redlich F. C., *op. cit.* p. 254.

<sup>5</sup>Commonwealth of Massachusetts, Massachusetts Department of Mental Health, *Department of Mental Health News* 1(3):p.4, January 1963.

<sup>6</sup>Vaughan, W.T., *Survey of Community Psychiatric Resources in Massachusetts*, Boston: Massachusetts Department of Mental Health, 1952.

<sup>7</sup>Gardner, E. A., All psychiatric experience in a community, *Arch. gen. Psychiat.* 9:369-378, 1963.

<sup>8</sup>Los Angeles Welfare Planning Council, *The Mental Health Survey of Los Angeles County 1957-1959*, Los Angeles: The Council, 1960, pp. 65-67.

## The Case-load of Canadian Psychiatrists

### *British Columbia*

In Vancouver, the 15 private psychiatrists had initial consultations with an average of 40 M.S.A. members residing in Vancouver during 1957 (Chapter 17). These 40 patients were in addition to those continuing and returning, or were non-insured, living outside Metropolitan Vancouver, or with other medical insurance.

In 1961 a questionnaire survey<sup>9</sup> of private psychiatrists in British Columbia, conducted for purposes other than the Royal Commission, was returned by 23 out of 30 psychiatrists. On the average each psychiatrist saw at least 160 persons annually and gave subsequent psychotherapy to 73 per cent of consultations for an estimated average of about six hours per patient during the year. Patients with medical insurance other than M.S.A. were excluded from this survey.

It is estimated that at least one-half of the psychiatrist's office practice was made up of insured patients. The frequency of psychotherapy following initial consultation was higher among M.S.A. members (82 per cent) than for non-insured members (63 per cent). Six per cent of M.S.A. members and 9 per cent of non-insured patients received more than 15 hours of psychotherapy during the calendar year.

### *Alberta*

MS(A)I data<sup>10</sup> were used for determining the services given to MS(A)I members by private psychiatrists in Alberta. Data on patients with other forms of insurance, or those who were not insured, were not available.

During the first six months of 1962, 18 private psychiatrists (14 full-time and 4 part-time) saw an average of 908 MS(A)I members per month. The average number of MS(A)I patients seen per month ranged from 22-109 per psychiatrist per month, with a mean of 50.

Among individual psychiatrists, the average number of visits per patient per month ranged from 1.5 to 4.3. The amount of psychotherapy averaged 83 visits per psychiatrist per month. The mean duration of an office visit for psychotherapy ranged from one-half to one hour per psychiatrist, with both a mean and median of three-quarter hours for all psychiatrists. Payment per psychiatrist per year by MS(A)I averaged \$14,600.<sup>11</sup> Payment for psychotherapy averaged 71 per cent of the total insurance plan payments, and ranged between 45 and 91 per cent among individual psychiatrists. There was considerable variation among the individual psychiatrists in the amount of psychotherapy and the number of referred consultations. At the extremes, during a six-month period, one psychiatrist had 799 visits for psychotherapy and 27 referred consultations, while another had 341 office visits and 155 consultations.

<sup>9</sup>British Columbia Medical Association, Section of Psychiatry, *A Study of the Psychiatric Treatment of M.S.A. and Private Patients*, March 1962.

<sup>10</sup>Medical Services (Alberta) Inc., *A Study of Certain Aspects of Psychiatric Benefits*, op. cit.

<sup>11</sup>This payment is based on the rate of \$13.50 per hour of psychotherapy, with extra-billing by the physician possible.



**TABLE 19-1**  
**CHARACTERISTICS OF THE MS(A)I PRACTICE OF 18 PRIVATE PSYCHIATRISTS**  
**IN ALBERTA, JAN. 1 - JUNE 30, 1962**

Doctors			Psychotherapy		Electrotherapy		Referred Con- sultations Total 6 Months	
	Av. No. Pts. Seen per Month	No. Serv. per Pt. per Month	No. Serv.	Av. Cost per Serv.	No. Serv.	Av. Cost per Serv.	No. Serv.	Av. Cost per Serv.
				\$		\$		\$
1	68	2.15	799	13.46	41	8.12	27	16.16
2	54	4.45	610	12.33	73	5.60	13	21.11
3	35	1.49						
4	32	3.23	495	8.13			5	45.00
5	36	4.15	257	11.43	29	6.20	48	17.15
6	64	2.05	600	9.52	24	8.62	44	13.80
7	31	2.11	229	7.65	4	9.00	1	9.00
8	50	2.18	587	10.39	13	9.00	28	15.75
9	64	2.40	407	12.28	53	7.98	122	19.03
10	36	3.38	572	6.94			6	9.00
11	25	2.60	126	13.33			63	17.07
12	33	3.72	535	11.35	22	6.75	38	14.44
13	65	2.49	341	11.40	96	7.54	155	17.50
14	94	3.02	844	8.13	137	6.44	65	16.40
15	32	3.56	593	12.43	50	7.47	35	15.62
16	109	2.28	793	9.21	160	7.10	62	14.95
17	58	4.27	352	8.99	44	4.80	30	15.30
18	22	4.22	413	8.71	23	7.43	24	16.31

Source: Medical Services (Alberta) Inc., *A Study of Certain Aspects of Psychiatric Benefits*, op. cit.

From the MS(A)I membership alone it can be estimated that each psychiatrist had about 210 consultations per year, of which 85 were referred and 125 were unreferred by physicians. The ratio of visits per consultation was about 5 per consultation. The mean length of contact is estimated at about 3 months and the mean cost of psychiatrists' care per patient per year at about \$60.00.<sup>12</sup>

### Ontario

A higher case-load does not seem restricted to psychiatrists in western Canada. A survey of the records of Physicians Services Inc., Toronto, for May, 1957, indicated that 54 psychiatrists (including 14 persons qualified in neurology and psychiatry) were estimated to have averaged 503 consultations and 965 hours of psychotherapy annually.<sup>13</sup>

<sup>12</sup>Medical Services (Alberta) Inc., *A Study of Certain Aspects of Psychiatric Benefits*, op. cit.

<sup>13</sup>Le Riche, H., and Stiver, W.B., The work of specialists and general practitioners in Ontario, *Canad. med. Ass. J.* 81:37-42, 1959.



**Conclusions**

(i) The size of the case-load of psychiatrists is markedly affected by social and economic factors.

(ii) United States' surveys indicate that the average number of patients seen by private psychiatrists ranged from 15-41 per month, and up to 141 per year.

(iii) British Columbia psychiatrists saw an average of 160 persons per year during 1961. Each private psychiatrist in Alberta saw an average of 50 MS(A)I members per month, and 210 MS(A)I members in initial consultation during 1962.



PART V

THE EXTENT OF PSYCHIATRIC MORBIDITY  
AND CARE





PSYCHIATRIC ILLNESS IN THE  
CANADIAN POPULATION

Introduction

Availability and Utilization of Medical Services

It is not usually possible to form adequate estimates of the extent of psychiatric morbidity in the general population from existing statistics on mortality, the utilization of hospital or psychiatrists' care, or the routine records of family physicians. Estimates based on such data minimize the morbidity, and are markedly affected by the extent to which these medical services are available to the population. Areas in which psychiatric consultation is more available usually have a higher frequency of psychiatric patients being cared for. This phenomenon occurs for other medical specialties. In the United States, there is a high correlation (0.94) between the ratios of internists and mortality due to coronary heart disease.

TABLE 20-1  
RELATION BETWEEN DEATH RATES FOR CORONARY HEART DISEASE  
AND FREQUENCY OF INTERNISTS, UNITED STATES, 1949-1951

Geographic Area	Death Rates for Coronary Heart Disease per 1,000 White Males, Ages 45 to 64, 1949-1951	Internists per 100,000 White Population
Middle Atlantic .....	6.2	12.6
New England .....	5.9	10.5
Pacific .....	5.9	9.7
East North Central .....	5.4	7.3
South Atlantic .....	5.2	8.8
West South Central .....	4.6	5.8
West North Central .....	4.5	6.7
Mountain .....	4.4	6.5
East South Central .....	4.0	4.5
Pearsonian Coefficient of Correlation + .94		

Source: Sauer, H.I., and Enterline, P.E., Are geographic variations in death rates for the cardiovascular diseases real? *J.chron. Dis.* 10:513-524, 1959.

### *Spectrum of Psychiatric Morbidity*

To an increasing extent it is being recognized that there is a wide spectrum of psychiatric morbidity. This spectrum includes the severe psychoses which traditionally required major social intervention in terms of hospitalization, problems of personal distress or malfunctioning, and the psychiatric symptoms accompanying various types of physical or social impairment. The process of attending a psychiatrist is the end-point of a complex set of social circumstances involving such factors as geography, finances, the availability of alternatives, attitudes, etc., implanted upon a process of "...self, family or community diagnosis based on folk notions and filtered medical ones about what constitutes psychiatric illness and what should be done about it..."<sup>1</sup>

For those patients with frank psychiatric illnesses who do attend family physicians there is a sequence of recognition, recording and referral. Not all of these patients attending physicians are recognized; not all of those recognized as having conspicuous psychiatric morbidity are recorded as such; not all of those recorded are referred for psychiatric care; and, finally, not all of those referred receive psychiatric care.

### *Surveys of Psychiatric Morbidity*

In order to obviate many of the problems mentioned above, a large number of surveys have been conducted to assess the mental health of a population. These surveys have varied widely<sup>2,3</sup> in the criteria used to identify a psychiatric case, but tend to use some form of questionnaire relating to symptoms. Lewis has referred to the extrapolation of diagnosis from such lists of symptoms as reversible and promiscuous:

"...There are, I know, psychiatrists who think little of diagnosis, dismissing it as a profitless exercise foisted on to earlier generations by Kraepelin; but even extremists in this matter would shrink from assuming that a person could be reckoned as having some degree of neurotic illness because (as in one of the studies I mentioned) he picked out 'nerves', or 'sleeplessness', or 'irritability' from a check list of 40 such symptoms, presented to him with a request that he should say which of them troubled him..."<sup>4</sup>

In most surveys it is difficult to relate treatment needs with the "diagnostic" categorization utilized,

"It is necessary therefore, for the epidemiological psychiatric studies to concern themselves with the identical categories of mental disorders which are handled by the clinicians and the administrators of community psychiatric services. A drawback of some of the past epidemiological studies is that they have, for the sake of methodological expediency, invented their own private definitions of categories of mental disorder, and in certain cases have even studied the distribution of 'global mental disorder', without breaking this down into the usually accepted diagnostic

<sup>1</sup>Blum, R. H., Case identification in psychiatric epidemiology: Methods and problems, *Milbank meml. Fund Q.* 40:253-288, 1962.

<sup>2</sup>Lin, T. Y., and Standley, C. C., *The Scope of Epidemiology in Psychiatry*, Public Health Papers No. 16, Geneva: W.H.O., 1962.

<sup>3</sup>Richman, A., Assessing the need for psychiatrists' care. A review of the validity of epidemiologic surveys, (in press) *Canad. psychiat. Ass. J.*

<sup>4</sup>Lewis, A., Current field studies in mental disorders in Britain in *Comparative Epidemiology of the Mental Disorders* (Hoch, P., and Zubin, J., Eds.), New York: Grune and Stratton, 1961, pp. 207-234.

categories. Thus much of their findings are of limited utility to the clinical psychiatrist and the administrator of psychiatric programs. The latter workers are forced to differentiate their treatment and their service planning in relation to the separate categories of mental disorders."<sup>5</sup>

Furthermore, it is essential to differentiate in these surveys whether or not clinical treatment by a psychiatrist is "needed":

"A distinction must thus be made between cases needing clinical treatment by a psychiatrist in a psychiatric facility and cases best approached through some other means, although possibly with the help of a psychiatrist, rather than listing together all manner of psychological symptoms and interpersonal difficulties. These other means [may range] . . . from other types of clinical facility or service by non-medical service to some form of social action . . .".<sup>6</sup>

In addition, population surveys have usually not differentiated whether the psychiatric symptoms were disabling in terms of causing definable loss of working or social capacity. Many of the surveys dealt with the life-time occurrence of symptoms, including those reported from the past, as well as those existing at the time of enquiry.

Reliable and valid criteria for the definition of a "case" "needing clinical treatment by a psychiatrist in a clinical facility" do not yet exist.

"...a simple total of the number of conditions found, or of the number of patients having specified conditions, is not necessarily a true reflection of the needs for facilities or services (including personnel)."<sup>7</sup>

Again, this wide spectrum of disability is not unique to psychiatry, and has been described for other areas of health services.

"...the distinction between health and illness becomes blurred, and the concept of medical need increasingly difficult to pinpoint in space or time. Rather there is a continuous spectrum with varying degrees of emphasis. It begins before we are actually ill; it does not cease when we are discharged from the hospital. Continuity and comprehensiveness are becoming indispensable aspects of effective medical care."<sup>8</sup>

Previous studies of the amount or prevalence of existing psychiatric illness have employed diverse methodologies and definitions. With regard to incidence, the ratio of *new* cases developing for the first time within a population during a specific period, "...very little research has been specifically designed to detect the true incidence of mental disorder in the general population...".<sup>9</sup>

### *Manifestations of Psychiatric Morbidity*

Recently, increased emphasis has been placed upon supplementing morbidity data based on hospital care with that from other sources.

"...attention is shifting to the statistics of day hospitals, out-patient clinics, and community care services. Records of sickness absence, drug prescriptions, insurance

<sup>5</sup> Group for the Advancement of Psychiatry, Committee on preventive psychiatry, *Problems of Estimating Changes in Frequency of Mental Disorders*, *op. cit.*

<sup>6</sup> Tyhurst, J. S., et al., *op. cit.*, p. 35.

<sup>7</sup> Commission on Chronic Illness, *Chronic Illness in the United States*, Vol. IV, Chronic Illness in a Large City, Cambridge: Harvard University Press, 1957, p. 123.

<sup>8</sup> Somers, H. M., and Somers, Anne Ramsay, *op. cit.*, p. 249.

<sup>9</sup> Lin, T. Y., and Standley, C. C., *op. cit.*, p. 20.

contributions, disabled-persons registers, and medical certificates also constitute, apart from a few pioneer studies, a largely untapped source of information...<sup>10</sup>

The following material describes various manifestations of psychiatric morbidity in the Canadian population. The recording of these manifestations did not depend on the utilization of psychiatrists' care.

## Psychiatric Illness in General Practice

### *Illness Recorded by Family Physicians*

The frequency of psychiatric illness in general practice is high, but the estimates vary widely.<sup>11</sup> In Canada, the College of General Practice stated that much mental disorder was seen in the consulting office of the general practitioner. Although estimates of the volume of this type of illness ranged from 5-30 per cent of general practice it was felt that probably the higher estimate was more accurate.<sup>12</sup>

TABLE 20-2  
ILLNESS<sup>1</sup> RATES FOR MENTAL DISORDERS, PER 1,000 MEMBERS,  
BRITISH COLUMBIA GOVERNMENT EMPLOYEES'  
MEDICAL SERVICES, 1960<sup>2</sup>

Age (years)	Sex	
	Male	Female
Total .....	23.2	42.4
Under 1 year .....	5.0	2.8
1- 4 .....	12.1	10.3
5- 9 .....	16.7	13.6
10-19 .....	11.0	19.3
20-29 .....	28.1	57.4
30-39 .....	38.3	70.5
40-49 .....	34.2	60.5
50-59 .....	29.0	55.0
60-64 .....	18.7	42.6
65-69 .....	17.6	61.8
70+ .....	19.6	37.0

<sup>1</sup> This represents illnesses for which medical attention was sought.

<sup>2</sup> British Columbia, Department of Health Services and Hospital Insurance, Division of Vital Statistics, Special Reports, No. 60, *Morbidity statistics of the British Columbia Government Employees' Medical Services, 1960*, November 1961.

Clute reported that diagnoses of psychoneuroses were recorded in 3.2 per cent of the non-hospital visits, and were the sixth most common reason for non-hospital visits.<sup>13</sup> A similar over-all rate of between 2-4 per cent was

<sup>10</sup>Editorial, Psychiatric Epidemiology, *Brit. med. J.*, 1: 1301-1302, May 18, 1963.

<sup>11</sup>Kessel, N., and Shepherd, M., Neurosis in hospital and general practice, *J. ment. Sci.* 108: 159-166, 1962.

<sup>12</sup>College of General Practice of Canada, brief submitted to the Royal Commission on Health Services, Toronto, May 1962.

<sup>13</sup>Clute, K. F., *op. cit.*, p. 246.



reported in the morbidity statistics of the British Columbia Government Employees' Medical Services for 1960. For females in various decades between 20-59, the recorded rates ranged from 5.5-7.1 per cent.<sup>14</sup>

In a five-year survey of medical insurance plan subscribers, Buck and Hobbs<sup>15</sup> reported 14 per cent of males, and 25 per cent of females being recorded as having a diagnosis of psychiatric illness.

TABLE 20-3

PERCENTAGE OF INSURANCE PLAN SUBSCRIBERS  
WITH DIAGNOSES OF PSYCHIATRIC ILLNESSES RECORDED OVER A 5-YEAR PERIOD

		N = 100%	Recorded Diagnosis of Psychiatric Illness	
			N	%
Males	20-39 years .....	52	8	15
	40-59 years .....	43	5	12
Females	20-39 years .....	52	14	27
	40-59 years .....	40	9	22

Source: Buck, Carol, and Hobbs, J.E., *The problem of specificity in psychosomatic illness, J. psychosom. Res.*, 3: 227-233, 1959.

*Illness Recognized, but not Recorded, as Estimated by Prescription Practices*

The diagnoses, and prescriptions issued by 330 Canadian physicians on 2 days of practice, were surveyed by Lea Associates<sup>16</sup> during February-May 1960. Of the physicians 181 were general practitioners, 37 were part-time specialists, 107 were full-time specialists, and 5 were psychiatrists or neurologists.

For the 9,700 patients seen in the office or hospital, 1,052 prescriptions were issued for ataractics and tranquillizers, psychostimulants, and sedatives and hypnotics. The proportion of recorded psychiatric diagnoses (ISC 300-326) among patients given these drugs varied from one-eighth to one-third.

TABLE 20-4

PROPORTION OF PSYCHIATRIC DIAGNOSES  
AMONG PATIENTS GIVEN VARIOUS TYPES OF PRESCRIPTION, CANADA 1960.

Type of Drug	Number of Prescriptions	Proportion of Psychiatric Diagnoses (I.S.C. 300-326) among Patients Given These Prescriptions
Ataractics and Tranquilizers .....	349	1/3
Psychostimulants .....	96	1/4
Sedatives and Hypnotics .....	607	1/8

Source: Lea Associates, Inc., Flourtown, Pa., *Canadian Disease and Therapeutic Index*, February-May, 1960.

<sup>14</sup>For British experience see Appendix 20-1.

<sup>15</sup>Buck, Carol, and Hobbs, J. E., *op. cit.*

<sup>16</sup>Lea Associates, Inc., Flourtown, Pa., *Canadian Disease and Therapeutic Index*, February-May 1960.

Among the 304 patients diagnosed as psychoneuroses, seven-eighths were given some prescription. One-quarter of these patients had not been previously diagnosed as psychoneurotic by their physicians.

In this particular survey of 330 Canadian private physicians, an average of 0.67 prescriptions per day per physician were given for ataractics, tranquillizers and psychostimulants, drugs specific for psychiatric illnesses or emotional factors. Of these prescriptions seven-tenths were given to patients *not* recorded as having a psychiatric illness. This is an indication of the extent to which recognized psychiatric illnesses are under-recorded, i.e., for every patient with a recorded diagnosis of psychiatric illness there were at least two patients for whom a drug specific for psychiatric illness was given but a psychiatric diagnosis was not recorded.

This survey estimated that over five million prescriptions for ataractics and tranquillizers and psychostimulants and an additional 8.7 million prescriptions for sedatives and hypnotics were prescribed by private physicians in Canada during 1960. The annual number of patient-visits for which diagnoses of psychoneuroses were recorded was estimated as over 3 million.<sup>17</sup>

### Industrial Sick Leave for Psychiatric Illness

In the Canadian Civil Service<sup>18</sup> during 1960, 58,802 days of sick leave were accounted for by diagnoses of psychiatric illnesses. Recorded diagnoses of psychiatric illness made up 7.9 per cent of the certified sick leave for females, and 5.1 per cent for males.

### Canadian Allowances for Permanent and Total Psychiatric Disability

Among the 52,700 Canadians qualified for government allowances for permanent and total disability during January 1, 1955—March 31, 1955,<sup>19</sup> 12,610 (23.9 per cent) were diagnosed as mental deficiency,<sup>20</sup> 1,122 (2.1 per cent) as schizophrenia, and 633 (1.2 per cent) as psychoneurosis. Qualification for this allowance required that the person be 18 years of age or over, not be a patient in an institution for any prolonged length of time and could qualify under a means test.

### Suicide

The reported number of suicides is generally regarded as being underestimated. Nevertheless, suicide is a significant cause of death.

"In 1958 suicide took the lives of 1,271 persons in Canada, more than in any year since records were kept. While not a leading cause of death, suicide now accounts for

<sup>17</sup>Even higher ratios of such dispensing were reported for the prescriptions filled for Saskatchewan beneficiaries of long-term public assistance during 1960-1961, where one-quarter (1.7 prescriptions per beneficiary per year) were for drugs affecting the nervous system and mental diseases. These beneficiaries, of whom nearly three-fifths were over 70, were required to pay one-half the cost of the prescription. Saskatchewan, Department of Public Health Annual Report, 1961-1962, Regina: Queen's Printer, 1963.

<sup>18</sup>Dominion Bureau of Statistics, *Illness in the Civil Service, Statistical Report, 1960*, Ottawa: Queen's Printer, 1962.

<sup>19</sup>Charron, K. C., *The magnitude of chronic disease in Canada*, *op. cit.*

<sup>20</sup>At the end of 1960 about 16,000 patients over the age of 15, diagnosed as mental retardation, were on the books of Canadian psychiatric institutions (Table 8-13).

over 200 more deaths than tuberculosis, represents as serious a problem as drowning and results in over twice as many fatalities as fires and conflagrations.”<sup>21</sup>

In British Columbia (during the same year) there were more deaths from suicide (N=172) than from *all the infectious and parasitic diseases combined* (N=153).<sup>22</sup>

Narcotic Addiction

The number of criminal narcotic addicts has decreased over the years. Although the Canadian population doubled between 1924 and 1963, the estimated number of criminal addicts decreased to one-third. Since 1955, national data on criminal addiction have been collected by the Narcotic Control Division of the Dept. of National Health and Welfare. It is not known to what extent these numbers represent current usage by “criminal addicts” since they include persons who have, during the preceding ten years:

been convicted of illegal possession of narcotics,  
been convicted of any offence, and are known to be narcotic addicts, or  
are addicted, and are suspected of having engaged in criminal  
activities or associations.

TABLE 20-5  
ESTIMATES OF THE NUMBER OF CRIMINAL ADDICTS  
AND NUMBER OF ANNUAL CONVICTIONS FOR NARCOTIC VIOLATIONS,  
CANADA, 1924-1963, SELECTED YEARS

Year	Population (millions)	Estimated Number of Criminal Addicts	Source of Estimate	Convictions under Opium and Narcotic Drug Act <sup>1</sup>
1924	9.2	9,000	Nat. Dept. of Health	218
1929	10.0	8,000	Nat. Div. Narcotic Control	266
1939	11.3	5,000	Nat. Div. Narcotic Control	222
1943	11.8	4,000	Nat. Div. Narcotic Control	133
1948	12.8	3,000	R.C.M.P.	316
1955	15.5	2,300	Dept. National Health & Welfare	365
1956	16.1	2,678	Dept. National Health & Welfare	391
1961	18.2	3,048	Dept. National Health & Welfare	478
1963	18.9	2,963	Dept. National Health & Welfare	..

<sup>1</sup> Includes convictions under Narcotic Control Act in 1961 and 1963.

Source: Richman, A., Borschneck, A., and Rienzi, A., *The natural history of drug addiction, Canad. psychiat. Ass. J.*, 9:431-438, 1964.

Names remain on this list until removed either by death, deportation, or until ten years have elapsed, during which time no adverse information concerning the individual has been received. Cards are reviewed each year and those with ten clear years are eliminated.

<sup>21</sup>Dominion Bureau of Statistics, *Mortality from Suicide, 1921-1958*, Ottawa: Queen's Printer, 1960, p. 3.

<sup>22</sup>Dominion Bureau of Statistics, *Vital Statistics, 1958*, Ottawa: Queen's Printer, 1960.

TABLE 20-6  
CRIMINAL ADDICT POPULATION, BY SEX AND AGE GROUP, CANADA, 1955-1964

Male	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964
Under 20 .....	13	22	12	21	17	14	13	2	9	8
20-24 .....	142	139	133	164	182	189	184	108	138	162
25-29 .....	280	275	288	307	308	304	339	325	344	355
30-34 .....	295	311	341	368	363	362	352	360	356	345
35-39 .....	213	212	226	253	281	312	340	373	333	315
40-49 .....	428	402	415	399	395	371	372	414	362	356
50-59 .....	232	209	215	227	213	211	213	252	211	211
60-69 .....	80	73	79	76	74	84	84	101	87	81
70 plus .....	22	16	21	26	22	25	23	33	20	16
Unstated .....	299	294	296	294	286	223	229	234	186	162
Total .....	2,004	1,953	2,026	2,135	2,141	2,095	2,149	2,202	2,046	2,011
Female										
Under 20 .....	26	16	13	26	38	35	32	10	20	22
20-24 .....	89	98	92	97	125	139	155	154	181	183
25-29 .....	128	141	160	171	183	180	207	178	188	187
30-34 .....	115	119	138	157	140	154	170	184	168	166
35-39 .....	74	75	83	86	98	102	110	141	131	123
40-49 .....	139	135	134	124	125	115	115	133	104	113
50-59 .....	27	27	34	45	40	37	39	56	56	49
60-69 .....	3	1	2	2	2	6	6	6	4	4
70 plus .....	1	1	1	1	—	—	—	—	—	1
Unstated .....	102	112	109	114	112	66	65	72	65	88
Total .....	704	725	766	823	863	834	899	934	917	936

Source: Richman, A., Follow-up of criminal narcotic addicts, (in press), *Canad. psychiat. Ass. J.*, 1965. Data supplied by Division of Narcotic Control, Department of National Health and Welfare.



Nationally there has been relative stability of the number of male criminal addicts (2,004 in 1955, 2,011 in 1964), but an increase for females from 704 in 1955 to 936 in 1964.

A seven-year follow-up study has been reported for criminal addicts imprisoned in British Columbia during 1955-1956.<sup>23</sup> One-half had remained addicted to narcotics during 1960-64. One-fifth were considered abstinent from narcotics usage for at least the last three years. The prospect for abstinence increased with age of the addict. Abstinence was *not less likely* in adults who had long histories of police contact, or who had numerous previous attempts to quit drugs voluntarily.

## Alcoholism

"This is an enormous health problem with impact in society in all walks of life in an infinite variety of ways."<sup>24</sup>

TABLE 20-7

SALES AND APPARENT CONSUMPTION OF BEVERAGE ALCOHOL PER CAPITA RELATED TO PERSONAL INCOME PER CAPITA,<sup>1</sup> CANADA, 1962

Province	Population Aged 15 and Older	Dollars Sales per Capita of 15 and Older	Personal Income per Capita of 15 and Older	Gallons of Alcohol per Cap. of 15 and Older
Newfoundland .....	274,500	\$65.7	\$1,581.1	0.95
Prince Edward Island ....	68,000	68.3	1,514.7	--
Nova Scotia .....	487,000	73.8	1,790.6	1.17
New Brunswick .....	377,700	68.5	1,673.3	1.02
Quebec .....	3,478,500	63.5	2,018.7	1.54
Ontario .....	4,290,200	86.6	2,562.4	1.81
Manitoba .....	630,000	87.9	2,306.3	1.59
Saskatchewan .....	611,600	74.0	2,403.5	1.34
Alberta .....	884,900	85.7	2,407.1	1.60
British Columbia .....	1,138,700	90.5	2,507.2	1.69
Canada .....	12,241,100	78.1	2,284.4	1.60

<sup>1</sup> Estimates of personal disposable income per capita were calculated on the basis of data in: National Accounts: Income and Expenditure 1962 (Dominion Bureau of Statistics, Ottawa). It should be noted that the income figures reported for any given year are subject to revision in the reports for subsequent years. Estimates of 1962 populations by age were obtained from: Estimated Population by Sex and Age Group, for Canada and Provinces, 1962 (Dominion Bureau of Statistics, Ottawa).

Source: Addiction Research Foundation (Ontario), 13th Annual Report, 1963.

The number of alcoholics, estimated by the Jellinek Formula, tends to be an under-estimate.<sup>25</sup> It is estimated that 2 per cent of adults manifest an alcoholic

<sup>23</sup> Richman, A., Follow-up of criminal narcotic addicts, *op. cit.*

<sup>24</sup> Canadian Mental Health Association, Committee on Psychiatric Services, Preliminary Report No. 4, Special Services, p. 27.

<sup>25</sup> Alcoholism and Drug Addiction Research Foundation, Ontario, *Alcoholism Research*, October 1959, p. 7.

problem.<sup>26</sup> In Ontario, it is estimated that 3 per cent of drinkers become alcoholics, there being a total of 85,000 alcoholics in the Province at the end of 1958.<sup>27</sup>

Nationally, 1.6 gallons of alcohol were consumed per capita for those aged 15 and over during 1962. This represented \$78 or 3.4 per cent of the personal per capita income for this age group.

### Conclusions

(i) Diagnoses of psychiatric illnesses are recorded for 2 to 4 per cent of the general population by family physicians annually.

(ii) It is estimated that for every patient recorded as having psychiatric illness, there are twice as many for whom psychiatric illness is recognized but not recorded by the physician.

(iii) Psychiatric illness accounted for over 5 per cent of the sick leave in the Canadian Civil Service during 1960.

(iv) One-quarter of the 52,700 persons qualified for government allowances for permanent and total disability up to March 1959, had psychiatric disability.

(v) Suicide is a significant cause of death in Canada.

(vi) Criminal narcotic addiction is high but not increasing.

(vii) Alcohol consumption represented 3.4 per cent of the personal per capita income of those aged 15 and over.

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<sup>26</sup> Canadian Psychiatric Association, *op. cit.*, p. 32.

<sup>27</sup> Alcoholism and Drug Addiction Research Foundation and the Department of Education, Ontario, *Alcohol Studies Guide*, 1961, p. 7.

## COMMUNITY SURVEYS OF PSYCHIATRISTS' CARE: MOOSE JAW, SASKATCHEWAN, AND LONDON, ONTARIO

### Introduction

#### *Purpose*

The purpose of this chapter is to provide estimates of the utilization of psychiatrists' care within two Canadian communities. Previous chapters have described the utilization of hospital care within two provinces, and the utilization of private psychiatrists' services by members of various prepaid medical insurance plans. It was felt that, in addition, utilization should be studied in areas with a relative concentration of both in-patient and out-patient psychiatric facilities. As emphasized in the previous chapter, the greater the availability of the service, the more likely it is that data on utilization would approximate the need for such care in the community.

#### *Selection of Communities*

In addition to having comparatively high ratios of local in-patient and out-patient services, these areas should be relatively small, geographically demarcated and without adjacent sources of psychiatric care, so that it would be operationally feasible to determine the number of people receiving psychiatrists' care. The communities selected were Metropolitan London and the Saskatchewan Census Division containing Moose Jaw, which, in addition to satisfying the preceding criteria, had suitable record systems.

#### *Characteristics of Communities*

London, the seat of Middlesex County, became a city in 1855. The hub of a railway and highway network, is described as the metropolis of western Ontario. With over 300 highly diversified industries, it is a manufacturing, distributing, financial, ecclesiastical and educational centre. It has been depicted as "A microcosm of Canadian life", a community backed and surrounded by a prosperous agricultural region to which it sells and for which it manufactures, while at the same time it reaches out to the markets of the world.<sup>1</sup>

<sup>1</sup>Encyclopaedia Canadiana, Ottawa: Canadiana Company Ltd., a subsidiary of the Grolier Society of Canada, 1960.

Moose Jaw, the third largest city in Saskatchewan, is a highway and railway centre, equidistant between Calgary and Winnipeg, and the terminus for the Soo Line Railway. It achieved city status in 1903 and has a large industrial output of products connected with the surrounding farm area which is chiefly devoted to wheat growing. Its stock yards are the largest west of Winnipeg.<sup>2</sup> In addition to the city population of 33,206, there were an additional 29,134 residents in the surrounding area of Saskatchewan Census Division 7. One-third of the male labour force were farmers or farm-workers.

The differences evident in the geography and industry of these two communities were not as marked demographically. There were slightly more aged in Moose Jaw (11 per cent) than London (9 per cent), but similar proportions of single people over the age of 15.

Although similar proportions of the population were residing within the province of their birth, London had a higher proportion of British origin (73 per cent) than did Moose Jaw (54 per cent). Among the immigrants in each area, post-war migration was more frequent in London (60 per cent) than Moose Jaw (20 per cent).

Educational attainment and earnings were somewhat higher in London. Working wives were almost as frequent in Moose Jaw (25 per cent) as London (31 per cent).

### *Method*

The research described in this chapter was enabled through the full co-operation of the physicians directing the various psychiatric services in the communities studied. In Saskatchewan, the co-operation of F. S. Lawson, M.D., and P. O. O'Reilly, M.D., and in Ontario, the co-operation of G. E. Jenkins, M.D., W. Keil, M.D., B. H. McNeel, M.D., E. V. Metcalfe, M.D., A. H. Sellers, M.D., W. A. Tilman, M.D., and D. M. Wickware, M.D., is acknowledged. Personnel involved in the local collection of data were supervised in London with the assistance of Professor G. E. Hobbs of the Department of Psychiatry, University of Western Ontario, and in Moose Jaw with the assistance of Dr. P. O. O'Reilly, Director, Department of Psychiatry, Union Hospital.

With the co-operation of the above physicians it was possible to obtain identifying information on admissions to psychiatric in-patient facilities in Moose Jaw and London during the three-year period 1958-1960. Concomitantly, D.B.S. punch-cards prepared from the individual morbidity cards submitted by local institutions, were duplicated. These punch-cards were forwarded by the Directors of provincial Mental Health Services in Saskatchewan and Ontario to the author.

Data from records of patients seen in out-patient clinics in Moose Jaw and London were copied onto pre-coded questionnaires and transferred to another set of punch-cards. The individual punch-card records for in-patients were added to those from out-patient clinics, and mechanical and electronic data-processing<sup>3</sup>

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<sup>2</sup>*Ibid.*

<sup>3</sup> The author acknowledges the assistance of personnel of the Tabulating Department, and Computing Centre, University of British Columbia.



TABLE 21-1  
DEMOGRAPHIC CHARACTERISTICS, METROPOLITAN LONDON  
AND MOOSE JAW AREA, 1961 CENSUS DATA

	Metropolitan London	Moose Jaw Area (Census Division 7)
Population		
Total: .....	181,283 = 100%	61,340 = 100%
City .....	169,569	33,206
Age Distribution		
Under 15 .....	54,420 = 30%	20,292 = 33%
15-64 .....	110,994 = 61%	34,598 = 56%
65+ .....	15,869 = 9%	6,450 = 11%
Marital Distribution (15 years+)		
15 + total .....	126,863 = 100%	41,048 = 100%
- single .....	29,510 = 23%	10,027 = 25%
Birth Place		
Canada .....	142,972 = 79%	51,141 = 83%
Same province .....	128,867 = 71%	42,438 = 69%
Ethnic Origin		
British Isles .....	132,555 = 73%	33,095 = 54%
Immigrant .....	38,311 = 100%	10,199 = 100%
Pre 1921 .....	8,572 = 22%	6,156 = 60%
Post 1945 .....	23,146 = 60%	1,997 = 20%
Schooling		
Population 5 years + not attending school .....	118,798 = 100%	39,288 = 100%
University .....	8,487 = 7%	1,693 = 4%
High School .....	67,748 = 57%	19,430 = 50%
Earnings		
Average earnings wage earner family heads .....	\$ 4,405	\$ 3,910
Working Wives (City)		
Total husband-wife families .....	37,560 = 100%	7,358 = 100%
Working wives .....	11,815 = 31%	1,863 = 25%
City Dwellings		
Total .....	47,428 = 100%	9,562 = 100%
Single detached .....	31,133 = 66%	6,665 = 70%
Built since 1945 .....	21,542 = 45%	3,250 = 34%
With television set .....	44,012 = 93%	8,229 = 86%
With automobile .....	35,782 = 75%	7,057 = 74%
Median value, owned dwellings .....	\$ 13,071	\$ 9,310
Mean rental, rented dwellings .....	\$ 77	\$ 62

along with visual inspection were used to identify duplicated individuals. Finally there was derived an integrated longitudinal record of psychiatric care for each patient admitted to public psychiatric institutions (in-patient and out-patient) in London and Moose Jaw during 1958-1960.

#### *Differences in Utilization May not Indicate Differences in Morbidity*

It is emphasized that it is not valid to consider these utilization rates of psychiatric care as comparing the risk or amount of mental illness in a

semi-rural area of Saskatchewan with that of an Ontario metropolis. It is not known to what extent the patient-population studied represents the number incurring or having a psychiatric illness during that period.

## Metropolitan London

### *Description of Psychiatric Facilities*

Metropolitan London had a concentration of private psychiatrists, out-patient clinics and in-patient facilities. There were two out-patient clinics for adults and children, one located at the largest General Hospital; the other, operated by the Ontario Mental Health Division, was independent. The two psychiatric units in general hospitals had a total of 82 beds. A 1,100-bed mental hospital was operated by the Ontario Mental Health Division, and the Federal Government had an 873-bed mental hospital.<sup>4</sup> In addition, there was a Children's Psychiatric Research Institute, which began operation during the latter part of 1960,<sup>5</sup> and over 8 psychiatrists in private practice. It was not feasible to survey those patients seen exclusively in the offices of private psychiatrists.

Regional differences in mental hospital admission rates from the 14 counties of western Ontario during 1950-52 were calculated by Buck, Wanklin and Hobbs.<sup>6</sup> While Middlesex County ranked eighth in over-all admission rates, rates for those aged 15-64 were second lowest, and for those aged 65 and over, second highest. For 1955-57 over-all admission rates from the five largest Ontario counties to mental hospitals and hospitals for the mentally retarded were lowest for Middlesex County.<sup>7</sup>

Trends in mental hospital admissions, and patients in residence or on books from Middlesex, Carleton, and Essex counties for 1958-60 are shown in Appendix 21-1. The rate of patients in residence or on books of mental hospitals was lower in Middlesex County than in Carleton or Essex counties.

During the three-year period 1958-1960 a total of over four thousand first admissions were reported from the four in-patient settings and 3,700 new patients to the two public out-patient clinics. Over-all statistics for these institutions, including patients from outside Metropolitan London, are found in Appendices 21-2,3,4.

### *Attendance for In-patient or Public Out-patient Care*

During the three-year period, 1958-1960, at least 2,475 individual residents of Metropolitan London were admitted to local psychiatric in-patient facilities or were seen by psychiatrists in two general out-patient clinics. Additional to this 1.5 per cent of the population, there were an unknown number of psychiatric patients seen only in the offices of private psychiatrists, in the psychiatric out-patient departments of the Federal Hospital, the Children's Hospital, or the Children's Psychiatric Research Institute, or continuously hospitalized during this period.

<sup>4</sup>The epidemiology of mental hospital admissions has been intensively studied for this area by Dr. G. E. Hobbs and members of his department at the University of Western Ontario.

<sup>5</sup>Not included in this survey.

<sup>6</sup>Buck, Carol, *et al.*, An analysis of regional differences in mental illness, *op. cit.*

<sup>7</sup>Ontario Department of Health, Division of Medical Statistics, Regional Variation in the First Admission Rate, Ontario Mental Hospitals 1955-57, *op. cit.*

TABLE 21-2  
RESIDENTS BEGINNING LOCAL PSYCHIATRIC IN-PATIENT CARE OR  
ATTENDING PUBLIC PSYCHIATRIC OUT-PATIENT CLINICS,  
METROPOLITAN LONDON, 1958-1960

Age Group (years)	Estimated Population 1959 (thousands)	Number of Patients (1958-1960)	Minimum Ratio Psychiatrists' Care per 1,000 Population (three-year period)
Under 15 .....	50	407	8.1
15-64 .....	105	1,756	16.8
65+ .....	15	312	20.6
Total .....	170	2,475	14.5

Note: Patients seen only in the offices of private psychiatrists are excluded.

First Admission for In-patient Care

Patients reported as first admissions to the four local in-patient facilities during 1960, who had not been identified as receiving previous hospital care during 1958 or 1959 formed the numerator for this estimate of the first admission rate. The hospitals included the two public psychiatric units, a provincial mental hospital and a federal mental hospital.

TABLE 21-3  
FIRST ADMISSIONS<sup>1</sup> TO LOCAL PSYCHIATRIC IN-PATIENT FACILITIES,  
BY AGE AND DIAGNOSTIC GROUPS,  
METROPOLITAN LONDON, 1960

	Number				Annual Ratio per 100,000 Population			
	Total	Under 15	15-64	65+	Total	Under 15	15-64	65+
ALL DIAGNOSES. ....	361	17	288	56	212	34	275	369
Functional psychoses...	83	3	72	8	49	6	69	53
Non-functional psychoses	52	—	20	32	31	—	19	211
Psychoneuroses.....	161	9	139	13	95	18	133	86
Other diagnoses.....	65	5	57	3	38	10	54	20

<sup>1</sup>Unduplicated patients reported as first admissions during 1960 who had not been previously hospitalized during 1959 or 1960.

The over-all first admission rates increased with age and were highest for psychoneuroses. Among the patients aged 15-64, half of the admissions were diagnosed as psychoneuroses, and one-quarter as functional psychoses. Among those aged 65 and over, non-functional psychoses made up four-sevenths of the diagnoses.

One-fifth of the patients (N=64) were non-voluntary admissions. About one-half of these non-voluntary patients were diagnosed as non-functional psychoses.

At the end of 1960, 25 of the 361 patients (6.9 per cent) still remained in hospital. One-half (N=13) of these remaining patients were diagnosed as non-functional psychoses.

## Moose Jaw Area

### *Description of Psychiatric Facilities*

In Moose Jaw in- and out-patient psychiatric services were provided by psychiatrists based in the local general hospital.<sup>8</sup> The services included psychiatric consultation and treatment for in-patients, out-patients and for aged patients in the local nursing homes. A provincial hospital for mentally defectives was located in Moose Jaw, but local children were assessed for admission at the mental health clinic. Medical staff consisted of two qualified psychiatrists and two residents in training, and accommodation for psychiatric in-patients amounted to 24 beds. It is recognized that some Moose Jaw patients may have attended private psychiatrists in Regina, or have been hospitalized elsewhere. However, none of these Moose Jaw patients would have been hospitalized elsewhere without previous contact with the local psychiatrists.

The over-all statistics for the psychiatric unit are shown in Table 21-4. During the three-year period 1958-1960, there were 383 first admissions (to any psychiatric in-patient service), and 386 re-admissions; 53 patients were transferred to other mental institutions. Average occupancy ranged between 67 and 83 per cent, and the mean stay of separations was about 24 days. In the

TABLE 21-4  
VARIOUS STATISTICS OF PATIENT CARE,  
MOOSE JAW UNION HOSPITAL, DEPARTMENT OF PSYCHIATRY,  
AUGUST 1, 1957-JULY 31, 1961

	1957-58	1958-59	1959-60	1960-61
<b>IN-PATIENT UNIT</b>				
ADMISSIONS				
Total .....	173	227	257	285
Male .....	61	95	105	121
Female .....	112	132	152	164
First admission .....	97	111	132	137
Readmission .....	76	116	122	148
DIAGNOSES OF FIRST ADMISSIONS				
Psychoses .....	37	45	52	65
Psychoneuroses .....	50	51	62	39
Other diagnoses .....	10	15	21	33
TRANSFERS TO MENTAL HOSPITAL	15	16	22	15
<b>OUT-PATIENT CLINIC</b>				
New patients .....	349	350	421	446
Number of interviews .....	2,256	3,563	3,556	3,971

Source: O'Reilly, P.O., *The development and function of a comprehensive psychiatric service in the Moose Jaw Union Hospital*, *op. cit.*

<sup>8</sup>This is described in O'Reilly, P.O., *The development and function of a comprehensive psychiatric service in the Moose Jaw Union Hospital*, *op. cit.*



out-patient clinic, 1,217 new patients were seen, and a total of about 11 thousand psychiatrist interviews given.

About 7,000 of these interviews were with residents of the Moose Jaw area, a ratio of four interviews per 100 total population per year. This ratio of four psychiatrist interviews per 100 total population is similar to the ratio of four psychiatrist-hours per 100 (MS(A)I subscribers described in Chapter 18). For the out-patients seen during the three-year period, the mean number of interviews was about seven per patient, and a median of three interviews.

Attendance for Local Psychiatrists' Care

During the three-year period 1958-1960, a total of 1,064 residents of the Moose Jaw area were seen by the local psychiatrists at the out-patient clinic, in-patient unit or in home visits.

TABLE 21-5  
ATTENDANCE FOR LOCAL PSYCHIATRISTS' CARE,  
MOOSE JAW AREA (CENSUS DIVISION 7),  
1958-1960

Age Group (years)	Estimated Population 1959 (thousands)	Number Residents Seeing Local Psychiatrists (1958-1960)	Ratio Psychiatrists' Care per 1,000 Population during 3 Years
Under 15 .....	19	121	6.2
15-64 .....	34	729	21.2
65 + .....	6	214	34.3
Total .....	60	1,064	17.7

Within a three-year period, at least 1.77 per cent of the total population were seen by a psychiatrist. The proportion attending psychiatrists was lowest for children, and highest for the aged.

First Admissions for Local In-patient Care

This consists of 224 admissions who were reported as not having been hospitalized in any psychiatric in-patient facility previously.

TABLE 21-6  
FIRST ADMISSIONS TO LOCAL PSYCHIATRIC IN-PATIENT UNIT,  
BY AGE AND DIAGNOSTIC GROUP,  
MOOSE JAW AREA, 1958-1960

	Number				Annual Ratio per 100,000 Population			
	Total	Under 15	15-64	65+	Total	Under 15	15-64	65+
ALL DIAGNOSES. ....	224	2	163	59	124	3	158	315
Functional psychoses. ....	39	—	36	3	22	—	35	16
Non-functional psychoses. ....	50	—	18	32	28	—	17	171
Psychoneuroses. ....	91	1	69	21	50	2	67	112
Remaining diagnoses .....	44	1	40	3	24	2	39	16

In addition to this local care, 113<sup>9</sup> residents of the Moose Jaw Health Area were reported to D.B.S. as first admissions by psychiatric in-patient facilities outside Moose Jaw. Upon the assumption (quite unjustified)<sup>10</sup> that these 113 were exclusive of those hospitalized in the Moose Jaw Union Hospital, and had not been hospitalized elsewhere previously, the rate of first admission would be 187 per 100,000 total population, and 223 per 100,000 for those aged 15-64.

The ratio of first admissions to readmission events was 1:1, for patients from the Moose Jaw area as well as for those outside the Moose Jaw area. The median stay of discharges was 25 days for both first admissions and readmissions. The proportion transferred to mental hospital was similar among first admissions (6.7 per cent) and readmissions (8.6 per cent). Three-quarters of the first admissions sent to mental hospital were psychoses of the senium. Among the readmissions so transferred, one-quarter were psychoses of the senium and one-half were schizophrenic.

*Incidence of Psychiatric Consultation*

Reliable information was available as to prior in-patient or out-patient psychiatric care, so it was possible to estimate the incidence of initial psychiatric consultation. Annually, one-fifth of one per cent of children, one-half of one per cent of those aged 15-64, and three-quarters of one per cent of those aged 65 and over were seen by a psychiatrist for the first time.

TABLE 21-7  
ANNUAL FREQUENCY OF INITIAL PSYCHIATRIC CONSULTATION,  
MOOSE JAW AREA, 1958-1960

	Number				Annual Ratio per 100,000 Population			
	Total	Under 15	15-64	65+	Total	Under 15	15-64	65+
ALL DIAGNOSES. ....	749	106	498	145	415	182	482	774
Functional psychoses. ....	106	1	87	18	59	2	84	86
Non-functional psychoses. ....	131	11	36	84	73	19	35	449
Psychoneuroses. ....	280	4	247	29	155	7	239	155
Remaining psychiatric diagnoses .	203	88	104	11	112	151	101	59
No psychiatric diagnosis. ....	29	2	24	3	16	3	23	16

Of the population aged 15 and over, 5.4 per 1,000 per year were seen by a psychiatrist for the first time. This frequency is similar to the ratio of 5.7 per 1,000 reported for referrals (who had not received consultation during the previous year) in northeast Scotland.<sup>11</sup>

<sup>9</sup> Three-eighths (N=42) of these 113 admissions were over 65 years old, and admitted to mental hospitals; 9 were admitted to the hospital for mentally defectives, and 25 were admitted to psychiatric units. The remaining 37 admissions were patients below the age of 65 admitted to mental hospitals. During January-June of 1958-1960 a total of 17 patients under the age of 65 were reported as first admissions to Weyburn Mental Hospital. All 17 patients were discharged alive before the end of the calendar year of admission within a mean of 60 days. Nine patients diagnosed as functional psychoses were discharged within a mean of 88 days.

<sup>10</sup> At least one-half of these 113 patients had been previously hospitalized in the Moose Jaw Union Hospital psychiatric unit.

<sup>11</sup> Innes, E., and Sharp, G. A., A study of psychiatric patients in North-East Scotland, *J. ment. Sci.* 108:447-456, 1962.

*Psychiatrists' Care in Moose Jaw*

In summary then, the Moose Jaw area, with a population of 60,000, had a total of four psychiatrists (two specialists and two residents) based in a local general hospital with an out-patient clinic and a 24-bed in-patient unit. About half of these psychiatrists' time was spent with patients from the local area. Nearly 0.6 per cent of the local population were seen each year. The great bulk of intensive in-patient care was provided in the local psychiatric unit. The ratio of psychiatric beds utilized locally was less than 0.4:1,000. In addition to in-patient care, the psychiatrists provided four interviews per 100 local population per year, plus an additional 1,300 interviews per year to residents from outside the study area.

**TABLE 21-8**  
ANNUAL FIRST ADMISSION RATES<sup>1</sup> TO IN-PATIENT FACILITIES  
PER 100,000 POPULATION AGED 15-64,  
VARIOUS CANADIAN COMMUNITIES, 1958-1960

	Metro- politan London <sup>2</sup>	Moose Jaw Area	Saskatchewan		British Columbia	
			Regina and Saskatoon	Rest of Sask. <sup>3</sup>	Metropolitan Vancouver and Victoria	Rest of British Columbia
ALL DIAGNOSES. ....	275	158	200	175	268	188
Functional psychoses. ....	69	35	67	67	90	58
Non-functional psychoses. . .	19	17	3	13	51	18
Psychoneuroses. ....	133	67	73	48	71	72
Remaining diagnoses . . . . .	54	39	57	48	55	40

<sup>1</sup>Admission rates based on unduplicated individuals for whom records of previous hospitalization were not found.

<sup>2</sup>Admission rates for metropolitan London are for 1960.

<sup>3</sup>Includes Moose Jaw area.

**Comparison with Other Communities**

The proportion of the population attending a psychiatrist in London and Moose Jaw is compared with data available from other communities in the United States, Scotland, Denmark, and from Vancouver, shown in Appendix 21-5.

Rates of first admission to in-patient facilities in London and Moose Jaw had been determined for unduplicated patients and may be compared with the data for unduplicated patients from Saskatchewan and British Columbia in Part III. Rates for the population aged 15-64 were highest in Metropolitan London and lowest for the Moose Jaw area. Although speculation upon diagnostic usage is hazardous, it is worth while to note that in four of the areas there were relatively similar rates for functional psychoses, ranging from 58 to 69 per 100,000, and a range of 67 to 73 per 100,000 for admissions diagnosed as psychoneuroses from four areas.

### Conclusions

(i) The proportion of the population attending out-patient clinics, or being admitted for in-patient care, was 1.5 per cent in Metropolitan London and 1.8 per cent in the Moose Jaw area during the three-year period 1958-1960.

(ii) The proportion attending psychiatrists was least among children, and highest among the aged.

(iii) The rates of first admission for in-patient care were higher in Metropolitan London than Moose Jaw, being nearly doubled for functional psychoses and psychoneuroses in the 15-64 age group, 202 per 100,000 against 102 per 100,000.

(iv) The rate of initial psychiatric consultation was 0.5 per cent per year for Moose Jaw residents aged 15-64.

(v) The bulk of in-patient care for first admissions from the Moose Jaw area was provided with less than 0.4 general hospital beds per 1,000.

(vi) The rates of psychiatrists' utilization in Metropolitan London and Moose Jaw were not higher than those reported from other communities in the United States, Scotland, and Denmark.



## ESTIMATING NATIONAL REQUIREMENTS FOR HOSPITAL CARE

### Introduction

The mechanical application of arbitrary formulas for calculating the required number of psychiatric beds has been deplored in Chapter 3. Many factors are involved in evaluating the need for in-patient facilities and include the following: the availability of medical facilities, services, and personnel; hospitalization practices of physicians; demographic and economic characteristics of the population; and the availability of transportation and communication resources.<sup>1</sup>

As described in the preceding chapter the utilization of services will approach the need for such care, the greater the availability of those services. In this chapter estimates will be made of the bed requirements indicated by some of the utilization data previously described.<sup>2</sup> The needs for patients with mental retardation will be described separate from those for patients with psychoses, psychoneuroses, or personality disorders.

### Reduction of Long-stay Patients in Mental Hospitals

#### *International Trends*

The total number of patients in mental hospitals has decreased markedly in Britain and the United States within the last ten years. Similar reductions in the ratio of hospitalized patients to population have occurred over longer periods of time for Ontario (Table 12-10) and have been described for Denmark, and Victoria, Australia.<sup>3</sup>

Tooth and Brooke<sup>4</sup> have estimated that the long-stay population of mental hospitals in England and Wales was running down at a rate which, if continued,

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<sup>1</sup>United States Department of Health, Education, and Welfare, Public Health Service, *Hill-Burton State Plan Data for Hospitals and Related Medical Facilities*, Washington: United States Government Printing Office, 1963.

<sup>2</sup>Further research in utilization of hospital care should include studies of: the attitudes and perceptions of physicians and of the public; use-rates under varying methods of medical care organization; methods of remuneration of physicians; medical evaluation of patients at a given time; medical criteria for admission; use of casualty departments; unmet hospital needs and waiting lists. United States Public Health Service, *Research in Hospital Use, Progress and Problems: A conference report*, Public Health Service publication No. 930-E-1, Washington: United States Government Printing Office, 1962.

<sup>3</sup>Richman, A., and Kennedy, Peggy, *op. cit.*

<sup>4</sup>Tooth, G. C., and Brooke, Eileen M., Trends in the mental hospital population and their effect on future planning, *Lancet*, i:710-713, 1961.

would eliminate it in about 16 years. At the same time replacement by a new long-stay population was occurring which might build up to about 89 patients per 100,000. These national estimates have been both supported<sup>5,6</sup> and criticized<sup>7,8,9</sup> but not refuted.

### *Comparison of Reduction in Canada with England and Wales*

The rate of reduction of Canadian long-stay patients is quite similar to those for England and Wales. Within three years, about one-fifth of the long-stay patients had left hospital in each area.

TABLE 22-1  
REDUCTION OF LONG-STAY<sup>1</sup> PATIENTS,<sup>2</sup> WITHIN THREE YEARS,  
ENGLAND AND WALES, 1954; CANADA, 1955

	England & Wales <sup>3</sup>		Canada <sup>4</sup>		
	Males	Females	All Institutions Males	Females	Public Mental Hospitals Both Sexes
Number of long-stay patients = 100% .....	48,281	63,832	19,852	17,089	33,692
Number remaining three years later .....	39,497	50,413	16,383	13,642	27,390
Percentage remaining three years later .....	82%	79%	83%	80%	81%

<sup>1</sup> Patients admitted more than two years previously.

<sup>2</sup> England and Wales — patients in residence, mental hospitals, Dec. 31, 1954, Canada — patients on books, Dec. 31, 1955.

<sup>3</sup> Tooth, G.C. and Brooke, Eileen M., *op. cit.*, *Lancet* *i.*, 710-713, 1961.

<sup>4</sup> Department of National Health and Welfare, Mental Health Division, *Selected Health Statistics, Canada 1955-1960*, *op. cit.* Patients diagnosed as mental deficienty are excluded from the Canadian data in order to achieve greater comparability with Britain where these patients are generally hospitalized outside of mental hospitals.

The ratio of 89 long-stay patients per 100,000, estimated by Tooth and Brooke, would represent about 20,000 patients for the Canadian population of 22.6 million projected for 1971.

<sup>5</sup>Cross, K. W., and Yates, Janet, Follow-up study of admissions to mental hospitals; some results relevant to further planning, *Lancet*, *i*:989-991, 1961.

<sup>6</sup>Brooke, Eileen M., Factors affecting the demand for psychiatric beds, *Lancet*, *ii*:1211-1213, 1962.

<sup>7</sup>Rehin, G. F., and Martin, F. M., *Psychiatric Services in 1975*, London: Political and Economic Planning, 1963.

<sup>8</sup>Baldwin, J. A., A critique of the use of patient-movement studies in the planning of mental health services, *Scot. Med. J.* *8*:227-233, 1963.

<sup>9</sup>Gore, C. P., *et al.*, Needs and beds, A regional census of psychiatric hospital patients, *Lancet*, *ii*:457-460, 1964.

*Reduction in Age-specific Rates for Long-stay Patients, 1955 and 1960*

From tabulations giving age-specific rates for patients with psychoses in mental hospitals in 1955 and 1960 (Table 8-12) the average annual percentage reduction in rates can be calculated. Projected age-specific rates can be then estimated by assuming the average annual percentage reduction in these rates would continue.<sup>10</sup>

TABLE 22-2  
PROJECTED NUMBER OF LONG-STAY PATIENTS<sup>1</sup>  
WITH PSYCHOSES IN MENTAL HOSPITALS, 1971,  
ASSUMING CONTINUATION OF 1955-1960 TRENDS

	Age Group (Years)			
	15-34	35-44	45-64	65+
Rate per 100,000, 1955 .....	67	270	522	650
1960 .....	57	206	445	593
Average annual percentage change .....	- 3.0%	-4.8%	- 3.0%	- 1.7%
Projected rate per 100,000, 1971 .....	38	97	298	482
Projected population (thousands), 1971 .....	6,753.5	2,544.4	4,123.7	1,788.3
Projected number of patients, 1971 .....	2,566	2,468	12,289	8,620
Actual number of long-stay patients with psychoses, 1960 .....	2,924	4,935	14,106	8,246

<sup>1</sup> Projected number of long-stay patients with psychoses for 1971 is based on the assumption that the percentage change in age-specific rates during 1955 - 1960 would continue.

The number of long-stay patients with psychoses projected by Kramer's method for 1971 is about 26,000. This is 14 per cent less than the number (30,281) remaining at the end of 1960. If the ratio of long-stay patients to population did not decrease,<sup>11</sup> and remained at the 1960 level of 170 per 100,000 population, one would expect 38,400 long-stay patients with psychoses on books of mental hospitals in 1971.

TABLE 22-3  
PATIENTS ON BOOKS OF PUBLIC MENTAL HOSPITALS,  
BY DIAGNOSTIC GROUP AND TIME SINCE ADMISSION, CANADA, 1960

	All	Under 2 Years	2 Years and Over
ALL DIAGNOSES.....	58,653	17,914	40,739
Psychoses.....	43,511	13,230	30,281
Mental retardation <sup>1</sup> .....	9,620	1,767	7,853
Remaining diagnoses .....	5,522	2,917	2,605

<sup>1</sup> Includes mental retardation with epilepsy.

<sup>10</sup>This method is described by Kramer in Trends of the Public Mental Hospital Population of the Nation, op. cit.

<sup>11</sup>This is unlikely, as evidenced by the continuous decrease in retention shown in Table 22-6.

*Decreasing Retention of Long-stay Patients with Psychoses*

The number who became long-stay patients in all Canadian institutions each year has remained relatively constant since 1953.

**TABLE 22-4**  
NUMBER OF PATIENTS REMAINING CONTINUOUSLY ON THE BOOKS  
AT THE END OF THE TWO CALENDAR YEARS AFTER THE YEAR OF ADMISSION,  
BY DIAGNOSTIC GROUP, ALL INSTITUTIONS, 1953, 1955, 1958

Diagnostic Group	Year of Admission		
	1953 <sup>1</sup>	1955 <sup>2</sup>	1958 <sup>3</sup>
ALL PATIENTS.....	4,050	4,119	3,963
Schizophrenia and paranoid psychoses.....	1,315	1,225	1,097
Affective psychoses.....	320	269	278
Senile psychoses.....	568	577	574
Mental deficiency.....	1,066	1,265	1,062
Remaining diagnoses.....	781	783	952

<sup>1</sup> Number of patients remaining at end of 1955.  
<sup>2</sup> Number of patients remaining at end of 1957.  
<sup>3</sup> Number of patients remaining at end of 1960.

For patients diagnosed as psychoses in public mental hospitals, the number becoming long-stay patients has steadily decreased from 2,373 for those admitted in 1953 to 2,186 for those admitted in 1960.

**TABLE 22-5**  
PATIENTS DIAGNOSED AS PSYCHOSES,  
NUMBER REMAINING CONTINUOUSLY ON THE BOOKS  
FOR TWO CALENDAR YEARS AFTER ADMISSION TO MENTAL HOSPITAL,  
BY YEAR OF ADMISSION, 1953-1960

Year of Admission	Number of Patients
1953.....	2,373
1954.....	2,291
1955.....	2,321
1956.....	2,284
1957.....	2,257
1958.....	2,214
1959.....	2,186
1960.....	2,186

Source: Richman, A., *Mental Hospitals in Canada, 1955-1962*, unpublished data.

More marked decreases have occurred in the subsequent retention of these long-stay patients. Although a larger number of patients were admitted in 1956 than 1952, there were fewer of the 1956 admissions remaining 6-7 years



(N = 1,013) than there were 1952 admissions remaining 9-10 years (N = 1,129). For the group staying 4-5 years there was a 32 per cent reduction from 1,865 for admissions during 1952 to 1,272 for admissions during 1958.

TABLE 22-6  
RETENTION OF PATIENTS WITH PSYCHOSES  
ADMITTED TO CANADIAN PUBLIC MENTAL HOSPITALS,  
1952, 1954, 1956, 1958, 1960

Year of Admission	Number of Years after Admission							
	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10
1952.....	..	2,113	1,865	1,679	1,485	1,374	1,251	1,129
1954.....	2,291	1,814	1,505	1,341	1,191	1,062	910	
1956.....	2,284	1,869	1,545	1,244	1,013			
1958.....	2,214	1,655	1,272					
1960.....	2,186							

Source: Richman, A., *Mental Hospitals in Canada, 1955-1962*, op. cit.

The Need for Concomitant Development of Community Mental Health Services

The ratio of 1.8 beds per 1,000 for England and Wales has been described as taking no account of any contribution from the expansion of community mental health services or from further advances in medical treatment and "... may well prove too high."<sup>12</sup>

MacLay<sup>13</sup> has emphasized the need for this concomitant development of community services.

"The pattern of hospital services makes no sense unless it is linked with a whole new development in the community services for the old, the sick, the mentally ill, and the mentally subnormal... What is needed is the provision of a complete range of services graduated to cater for the complete independence of full mental and physical health, and the almost complete dependence of the old or subnormal when the need for care and attention is little short of that which only a hospital can provide."

Kramer<sup>14</sup> has indicated that reduction of the mental hospital population in the United States by 50 per cent within the next decade or two is quite possible, provided appropriate hospital and community programs for treatment, care and rehabilitation are developed to make possible the placement of many patients now in these hospitals in community facilities more appropriate to their needs than the public mental hospital, the reduction of admissions to these hospitals, and the rapid turnover of patients who must be admitted to these institutions.

<sup>12</sup> England and Wales, Ministry of Health, *A Hospital Plan for England and Wales*, London: Her Majesty's Stationery Office, 1962.

<sup>13</sup> MacLay, W. S., Trends in the British mental health service, *Proceedings of the Third World Congress of Psychiatry*, Montreal, 1961, Vol. I, Toronto: University of Toronto Press, 1962, pp. 98-102.

<sup>14</sup> Kramer, M., Trends of the Public Mental Hospital Population of the Nation, op. cit.

Such programs would include:

- Comprehensive community mental health centers and the associated broad spectrum of in-patient, out-patient, preventive, therapeutic, and rehabilitative services;
- Additional psychiatric services in general hospitals;
- Adequate in-patient and out-patient facilities and programs for the care of seriously emotionally disturbed children and adolescents;
- Satisfactory facilities for the placement of chronic and aged psychotics;
- Nursing homes and other facilities for patients with mental disorders of old age.

The services proposed for community mental health centres in the United States have been described by the Department of Health, Education, and Welfare.<sup>15</sup> For a population of 100,000, services would include an in-patient unit of 25 beds, round-the-clock emergency services, out-patient consultation and care for up to 3,000 persons annually, and provision for 50 places for partial day or night care.<sup>15</sup> Consultative services to personnel in community agencies and educational services to the general public would also be provided. The professional staff necessary for such a center has been estimated to be (per 100,000 population) 10 psychiatrists, 8 psychologists, 8 social workers and 19 nurses.<sup>16</sup>

Cawley and Trethowan<sup>17</sup> have suggested that under optimum conditions of psychiatric practice the number of beds can be reduced, and day hospital and hostel places, out-patient facilities and community services proportionately increased. They propose that accommodation for intensive treatment of day-patients amount to 0.3 places per 1,000, and 0.2 places per 1,000 for rehabilitation of day-patients. The need for adequate accommodation in hostels where patients may stay for short periods, should alterations in home circumstances make this desirable, or for longer periods when living at home was not possible for psychological or social reasons, was stated as 0.1 short-stay beds and 0.6 long-stay beds per 1,000.

In further discussion of a balanced hospital community, wherein hospitals are planned as a group of buildings providing facilities appropriate to the various needs of all classes of patients drawn from a defined population, Cawley and Trethowan suggest that there be (for a population of 100,000) a child and family psychiatric unit with provision for 25 in-patients, and 10 day-patients, an adolescents' unit with provision for 20 in-patients and 10 day-patients, and a unit for psychopaths with provision for 10 in-patients and 10 day-patients.

The establishment of special units for psychopaths and other dangerous violent and criminal patients has been advocated by a British Working Party

<sup>15</sup>United States Department of Health, Education, and Welfare, *Hearings before a Subcommittee of the Committee on Interstate and Foreign Commerce*, House of Representatives on S. 1576, July 10-11, 1963, Washington: United States Government Printing Office, 1963, pp. 19-20.

<sup>16</sup>United States Department of Health, Education, and Welfare, *Hearings before a Subcommittee of the Committee on Interstate and Foreign Commerce*, House of Representatives, on H.R. 3688, 2567, 3689, March 26-28, 1963, Washington: United States Government Printing Office, 1963, p. 101.

<sup>17</sup>Cawley, R. H., and Trethowan, W. H., *Psychiatry and the balanced hospital community*, op. cit.

of the Ministry of Health and Home Office.<sup>18</sup> This would involve the establishment of special units for observation, diagnosis, treatment, and training and research. In addition to units specially designed for the treatment of disruptive patients in each region, when both voluntary and compulsorily detained patients can be kept with some success, there should be special hospitals for compulsory detention of patients whose aggressive, antisocial or criminal tendencies make conditions of special security necessary whether they have appeared before a court or not.

### National Estimates of In-patient Needs

#### *Estimate of In-patient Needs for England and Wales, 1975*

On the basis of the decline in the mental hospital population predicted by Tooth and Brooke, the Hospital Plan for England and Wales has taken a ratio of 1.8 beds for 1,000 population as a probable limit of requirements by 1975 (compared with the 1954 ratio of 3.3 beds per 1,000). This ratio of 1.8 beds includes 0.34 beds for treatment of up to 3 months in duration, 0.53 beds for continued treatment up to 2 years, and 0.89 beds for long-stay patients. A reduction of about 67,000 beds in mental hospitals, and increase of about 7,000 beds in general hospitals, is proposed.<sup>19,20</sup>

#### *Estimate of In-patient Needs for Canada*

The following estimates of in-patient requirements<sup>21</sup> are based on utilization data for Saskatchewan, described in Chapter 15. These estimates would be reduced by more extensive out-patient and community services.

"In-patient needs cannot properly be determined without a full and efficient out-patient service. When the latter has been achieved the proper demand on in-patient care can be more accurately measured . . ."<sup>22</sup>

During 1958-60 the estimated first admission rate was 154 per 100,000 overall and 181 per 100,000 aged 15-64 for Saskatchewan, and 200 per 100,000 aged 15-64 in Regina and Saskatoon. During the first year following admission an over-all average of 100 days of hospital care were utilized per patient. Of these hospital days, over two-fifths were used by patients with non-functional psychoses, and less than one-third by patients with functional psychoses or psychoneuroses.

Based on a first admission rate of 200 per 100,000 and a mean of 100 hospital days per patient in the first year following admission, the annual days of hospital care per 1,000 population would amount to 200 days (equivalent to 0.55 beds per 1,000).<sup>23</sup>

<sup>18</sup>Maclay, W. S., *op. cit.*, p. 101.

<sup>19</sup>England and Wales, Ministry of Health, *op. cit.*

<sup>20</sup>Rehin, G. F., and Martin, F. M., *op. cit.*, p. 2.

<sup>21</sup>Accommodation for patients with mental deficiency is separately discussed.

<sup>22</sup>Davies, J. O. F., Problems for operational research in the National Health Service in *Towards a Measure of Medical Care, Operational Research in the Health Services: A Symposium*, published for the Nuffield Provincial Hospitals Trust by the Oxford University Press, 1962, pp. 1-17.

<sup>23</sup>To provide an occupancy ratio of 80 per cent, 0.69 beds per 1,000 would be needed.



This estimate of 0.55<sup>24</sup> beds for intensive treatment per 1,000 population is based on admission rates from metropolitan areas, and hospital use including continuing care for patients with psychoses of the senium and mental deficiency. As suitable alternatives will be developed for the care of the aged and retarded, it is felt that sufficient provision has been made for the intensive hospital care used by readmissions.

It is emphasized that the above mentioned ratios can be markedly affected by the development and expansion of community alternatives to in-patient care and it is necessary to consider these ratios in terms of *bed-equivalents*. Thus, the personnel, plant, and program used for hospitalized patients may be utilized by a larger number of patients receiving partial hospitalization, ambulant services, or community supervision. With future changes in program the physical space must be used in a variety of ways and, in fact, the development of small, flexible units is advocated.<sup>25</sup>

### Hospital Care for Patients with Mental Retardation

Estimating the hospital needs for patients with mental deficiency is far more difficult. The Hospital Plan for England and Wales stated:

"Very different considerations govern the provision required for the sub-normal and severely sub-normal. There are now 1.3 beds per 1,000 population and substantial waiting lists which represent a real need for hospital care... On the one hand it is necessary to take account of the waiting lists and of the increased expectation of life of sub-normal and severely sub-normal, and to allow for the greater readiness of parents to seek admission to hospital for the children, particularly as informal patients. On the other the expansion of community services will avoid or postpone the need for hospital admission in many cases and will enable more patients to be discharged. It may also become possible to prevent the occurrence of certain forms of mental sub-normality. The net effect of all these factors is impossible to quantify... Provisionally it has been assumed that eventually the factors mentioned above will more or less offset one another, and plans may need radical alteration in one direction or another as time goes on."<sup>26</sup>

Maclay<sup>27</sup> has stated that since there are influences tending to increase and to decrease the pressure on hospital beds for the retarded, care must be taken in planning to try to ensure that the obvious need at the moment does not lead to provision of too many beds, which will become redundant in the future.

Nationally, between 1951 and 1960, the absolute number of patients under hospital care increased by one-half for those diagnosed as mentally defective, and by less than 10 per cent for those with psychoses. At the end of 1960 there were 19,590 patients with mental deficiency under hospital care, with a

<sup>24</sup>Nationally, at the end of 1960, there were 1.3 patients on the books per 1,000 population who had been admitted within two years; functional psychoses made up 0.6 per 1,000 and psycho-neuroses 0.1 per 1,000.

<sup>25</sup>United States Department of Health, Education, and Welfare, Report of the Surgeon General's Ad Hoc Committee on Planning for Mental Health Facilities, *Planning of Facilities for Mental Health Services*, *op. cit.*

<sup>26</sup>England and Wales, Ministry of Health, *op. cit.*

<sup>27</sup>Maclay, W. S., *op. cit.*



median stay of  $8\frac{1}{2}$  years. The consistent increase in the ratio of patients hospitalized with mental deficiency in Ontario between 1937 and 1960, and their increasing representation in the total hospital population, has been shown in Table 12-14.

It is likely that many of the patients currently in institutions could be cared for in other types of facility. Of the 12,273 patients in California State hospitals for the retarded in 1963, evaluation revealed that only 36.3 per cent required hospitalization for medical, surgical or psychiatric reasons.<sup>28</sup> If alternative facilities had been available, 30.3 per cent of the patients could have received adequate care in a 24-hour nursing home. Another 28.6 per cent could be placed in foster homes and 4.7 per cent could return to their own homes or the homes of relatives if assistance were available. In the same report, in general, either 24-hour nursing home care or hospital care for medical-surgical reasons was recommended for the young, severely retarded, non-ambulatory patients and the elderly patients. Foster home care or hospitalization for psychiatric reasons was generally recommended for the moderately or mildly retarded, ambulatory patient.

Official estimates of the frequency of mental deficiency in the population yield no reliable picture. Current estimates of the frequency of retardation among pre-school children range from 0.2 per cent,<sup>29</sup> to  $2\frac{1}{2}$  per cent<sup>30</sup> and 3 per cent.<sup>31</sup> Similarly, the estimated frequency in the population beyond school age ranges from one per cent to 3 per cent. In British Columbia the ratio of children recorded at the end of 1961 with the Registry for handicapped children as having some degree of retardation (both institutionalized and at home) increased from 0.2 per cent of those below six, to 0.7 per cent for those aged 6-15, and 0.8 per cent for those aged 16-20 (Appendix 22-1).

Tarjan<sup>32</sup> has estimated the probable frequency of mental retardation in the general population to be one per cent. He suggests this lower ratio is due to many school children, diagnosed as mentally retarded, disappearing from the labelled groups upon adulthood and becoming reabsorbed or adapted in the general population, as well as mortality remaining higher among the retarded. The prevalence of mild mental retardation is estimated as 0.7 per cent rather than 2.5 per cent, moderate retardation as 0.15 per cent rather than 0.4 per cent, and severe retardation as 0.05 per cent rather than 0.1 per cent. From a general population of 100,000, Tarjan expects that instead of identifying 300 mildly retarded children under the age of six, 15 would be found, and in lieu of 1,400 mildly retarded adults over 24 only some 65 would be identified.

<sup>28</sup>California Department of Mental Hygiene, Research Division, Biostatistics Section, *Survey of Patient Needs for Residential Care and Assistance: Hospitals for Mentally Retarded, Pre-admission Services*, 1963; Bulletin No. 34, August 1963.

<sup>29</sup>United States Department of Health, Education, and Welfare, Report of the Surgeon General's Ad Hoc Committee on Planning for Mental Health Facilities, *op cit.*, p. 16.

<sup>30</sup>Association for Retarded Children in Manitoba, brief submitted to the Royal Commission on Health Services, Winnipeg, January 1962.

<sup>31</sup>Canadian Association for Retarded Children, brief submitted to the Royal Commission on Health Services, Toronto, May 1962.

<sup>32</sup>Tarjan, G., The next decade: Expectations from the biological sciences, *J. Amer. med. Ass.* 191:226-229, 1965.

The majority of the retarded in the community are not regarded by Cawley and Trethowan<sup>33</sup> to require medical care *per se*:

"The requirement is primarily for special educational and training procedures, occupational therapy and sheltered employment, in a social group in which some of the mentally subnormal will be resident whilst others live outside..."

The need for strengthening the programs of community mental health services in the area of mental retardation has been emphasized by the Canadian Association for Retarded Children.

"There is little doubt that community mental health clinics, Childrens' Hospital Clinics and Child Guidance Clinics could go a long way to meeting the special needs of the retarded if existing programmes were strengthened through the addition of extra personnel, specially trained in the field of retardation, and responsible for the development of specific programming for the retarded within the structure of existing clinic practice."<sup>34</sup>

## Conclusions

(i) The proportion of the population in mental hospitals has been decreasing for some years. The reduction of Canadian long-stay patients is similar to that for Britain. Projection of present trends indicates a reduction of 14 per cent in the absolute number of long-stay patients with psychoses from 30,000 in 1960 to 26,000 in 1971.

(ii) Although the total number becoming long-stay patients has changed relatively little between 1955 and 1960, there has been a 15 per cent reduction in the number of patients with functional psychoses entering the long-stay group with two to three years of hospital care.

Subsequent attrition of those entering the long-stay category has also increased. The number of patients with psychoses remaining four to five years after admission was 32 per cent lower for patients admitted in 1958 than for those admitted in 1952.

(iii) Expansion of community mental health services will further reduce the needs for hospital care. On the basis of Saskatchewan experience during 1958-59 it is estimated that in-patient needs for the care of admissions (excluding mental retardation) averaged 200 days per 1,000 population. The in-patient needs for mental retardation cannot be assessed until better data are available from areas with comprehensive programs of community care.

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<sup>33</sup> Cawley, R. H., and Trethowan, W. H., *op. cit.*

<sup>34</sup> Canadian Association for Retarded Children, *op. cit.*

## APPENDICES





## APPENDIX 1-1

### EVALUATION OF HEALTH SERVICES

This appendix is intended to present some definitions and an outline of the basic requirements for the evaluation of health services in general.

#### Characteristics and Components of Evaluation

##### *Definition of Evaluation*

Evaluation has been defined by the World Health Organization<sup>1</sup> as the process of determining quantitatively or qualitatively, and by appropriate means, the worth of a thing or event.<sup>2</sup> This process consists of the factual reporting and assessment of the progress made towards attaining the objectives. It is therefore essential that the process of evaluation should start at the inception of a project, and that it be recognized as an integral and continuous part of the responsibility for running a project.

The minimum steps for determining the amount of success in achieving the pre-determined objectives include:<sup>3</sup>

- formulation of objectives;
- identification of the proper criteria to be used in measuring success, and
- determination and exploration of the degree of success.

##### *Incorporation of Evaluation as Part of Service*

Sydenstricker<sup>4</sup> emphasized that experiments or innovations in public health could only be evaluated statistically when the proper facilities for measurement were provided as an *essential part* of the program. With such incorporation it is possible to select or construct methods for evaluation appropriate for the particular goals of that program, and the situation in which the program effort is being made. Development of evaluation plans along with program plans will help to assure that the goals are specific, that criteria of achievement adequately represent evidence of goal achievement, and that steps are taken to obtain an adequate base line from which to measure change. The results of evaluation must be tied closely to program needs, goals and methods in order to be of maximum use in making future decisions.<sup>5</sup>

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<sup>1</sup>World Health Organization, *Manual, Programme Evaluation*, X.4, Sept. 28, 1956.

<sup>2</sup>"Be sure the juice is worth the squeeze...It takes a measure of energy to squeeze even a drop. Be sure that the energy expended by all concerned is justified on the basis of the useful characteristics of the drop." Gaines, C. W., "Be sure the juice is worth the squeeze", *Am. J. publ. Hlth.* 46:215-216, 1956.

<sup>3</sup>American Public Health Association, Committee on Public Health Administration, Glossary of administrative terms in public health, *Am. J. publ. Hlth.* 50:225-226, 1960.

<sup>4</sup>Sydenstricker, E., The statistical evaluation of the results of social experiments in public health, *Proceedings of the American Statistical Association*, March 1928.

<sup>5</sup>Knutson, A. L., Evaluation for What? *Proceedings of the Regional Institute on Neurologically Handicapping Conditions*, University of California, Berkeley, June 18-23, 1961.

Evaluation may be said to be *built-in* when the service or program has a record system which allows examination of the performance that the particular service is intended to provide.<sup>6,7</sup>

### *Formulation of Objectives*

Objectives are the defined end result of specific public activity, to be achieved in a finite period of time. They are stated as definite aims or goals of action, which should be quantitatively measurable, capable of being reflected in standards of performance, and can be long range, intermediate, and short range.<sup>8</sup>

The objectives of a program or service should be differentiated from the techniques to be used. For example, the objective of a program should not be specified as "to supply public health nursing services", or "to do mental health education". Public health nursing services and mental health education are techniques used to achieve some pre-determined goal. The goal to be achieved by the provision of these services should be spelled out.<sup>9</sup>

Usually, it is easier to assess the various components of a program than the major objectives. Since any medical or health program has as its major objective the reduction of morbidity or mortality, it is necessary to distinguish between the evaluation of the effectiveness of the program in attaining the major objectives or the ultimate goals and evaluation which will examine these components and their effectiveness in the light of the immediate goal. Each component and intermediate objective should be also subject to critical evaluation.<sup>10</sup>

### *Appropriate Measures of Effectiveness*

Effectiveness is defined as the degree to which the specific aims are achieved.<sup>11</sup> The criteria used for estimating effectiveness must be logically connected to the epidemiologic rationale behind the program.<sup>12</sup> Base line measurements at the time the objectives are established, or suitably matched samples or control groups, and some indication of the durability of the effects are essential.<sup>13</sup>

<sup>6</sup>Davies, J. O. F., Problems for operational research in the National Health Service in *Towards a Measure of Medical Care, Operational Research in the Health Services*, *op. cit.*

<sup>7</sup>"This was a regulation that compelled every physician and surgeon to file a complete history of each of his cases with the chief medical officer of his district. From diagnosis to complete recovery or death, each detail of the handling of each case had to be recorded and placed on record for the public to consult. When a citizen requires the services of a physician or surgeon now, he may easily determine those who have been successful and those who have not. Fortunately, today there are few of the latter. The law has proved a good one." Burroughs, Edgar Rice, *Pirates of Venus*, New York: Ace Books, Inc., no date, p. 68.

<sup>8</sup>American Public Health Association, Committee on Public Health Administration, *op. cit.*

<sup>9</sup>American Public Health Association, *Mental Disorders, A Guide to Control Methods*, *op. cit.*, p. 97.

<sup>10</sup>Sheps, Mindel C., in *Transactions of the 4th Conference on Administrative Medicine*, (Edited by George S. Stevenson), New York: Josiah Macy Jr. Foundation, 1956, pp. 112-114.

<sup>11</sup>American Public Health Association, Committee on Public Health Administration, *op. cit.*

<sup>12</sup>Fleck, A. C., Jr., Evaluation as a logical process, *Can. J. publ. Hlth.* 52:185-191, 1961.

<sup>13</sup>United States Department of Health, Education, and Welfare, Advisory Mental Health Council, Community Services Committee, Report of the Subcommittee on Evaluation of Mental Health Activities, *Evaluation in Mental Health*, Public Health Service Publication No. 413, Washington: United States Government Printing Office, 1955.

### *Efficiency*

Efficiency is defined as the capacity of an individual, organization, facility, operation or activity to produce results in proportion to the effort expended.<sup>14</sup> Activities may be similar in effectiveness, but differ in efficiency.

It is also necessary to consider service aspects of efficiency (as described by Johnson).<sup>15</sup> Service efficiency includes the processes which increase the *acceptability* of services to the public by providing ready and equal access through geographical location, by maintaining the citizen's ability to influence the service, and by adapting the services to the needs of the community as the needs of the community change.

### *Implementation of Findings*

Evaluation is characterized by the intention that the *findings be applied* to modify the services studied. The distinguishing feature which converts a search for knowledge into an evaluation project is the presence of a purpose that the knowledge sought is to be used as a guide for practical action.<sup>16</sup>

### **The Need for Evaluating Existing Programs**

"...Once a service was established it tended to become somewhat stereotyped in method. There was not yet a tradition of assessment, and response to changes in the problem or to developments in medical knowledge was spasmodic and instinctive rather than systematic and planned."

"...Once services have grown up through pressure by interested bodies and the well informed guess of those in authority, there is a tendency towards the development of vested interests in the continuance of these services with a corresponding disinclination for objective assessment of their value."<sup>17</sup>

Appropriate methods for evaluation must be incorporated into existing as well as new programs to ensure that they are effectively reaching their objectives.<sup>18</sup> Reasons for such evaluation include:<sup>19</sup>

- Initial plans are imperfect because direct experience in solving the problem is lacking;
- Disease patterns and social conditions change and a program or method designed for one period of time is not necessarily appropriate for a later period;
- The priorities assigned to each public health agency's programs need evaluation to ensure a balanced response to the health problem of the population.

<sup>14</sup>American Public Health Association, Committee on Public Health Administration, *op. cit.*

<sup>15</sup>Johnson, A. W., Efficiency in government and business, *Can. J. publ. Admin.* Sept. 1963.

<sup>16</sup>Fleck, A. C., Evaluation research programs in public health practice, *Ann. N.Y. Acad. Sci.* 107(2):717-724, 1963.

<sup>17</sup>Brotherston, J. H. F., Medical care investigation in the health services, in *Towards a Measure of Medical Care: Operational Research in the Health Services*, A Symposium, *op. cit.*, pp. 18-54.

<sup>18</sup>In Britain, almost every investigation into the working of the National Health Service made to date has resulted in discovery of major differences between actual practice and assumed practice. Brotherston, J. H. F., *op. cit.*

<sup>19</sup>Hilleboe, H. E., Research in Public Health Practice, Lecture at Columbia School of Public Health and Administrative Medicine, New York City: April 11, 1962, (duplicated).



"The reasons for neglect are worth mentioning. In the past, programmes were usually established to solve problems as quickly as possible with available resources. No time was given to long-term planning. Once the programme got under way, its administrators became preoccupied with daily needs. They had little or no time for reflexion and appraisal of where the programme was headed or why, how much progress toward the stated objective was being made or whether resources were being used to get optimum results."<sup>20</sup>

This preoccupation of program administrators with day-to-day problems is also described by Montacute,<sup>21</sup> who considers that planning includes both identification of the problem, and researching and thinking about it. Identification is a once-for-all job, best done perhaps by practising administrators. But unless the planning and research body is available whose job is to carry out research, not on the problems of today, but on those of tomorrow, the long-range problems will not be tackled in the proper way. Montacute states that special organizational provision for evaluation is necessary to solve the problem of "Gresham's Law in administration", that short-term decisions tend to drive out long-term considerations.

### Problems in Evaluation

There is considerable need for not merely more evaluation, but more acceptable evaluation, based as far as possible on the rigorous demands of scientific method.<sup>22,23</sup> Problems in evaluation involve failure to adhere to some of the principles described above.

#### *Lack of Accountability of Clinical Services*

Dorken has detailed the manner in which demand for clinical services becomes so exclusive that program control and direction are basically lost.

"In developing the service, at the outset, in response to community need, there is usually the hope that it will help to control the problem and have a preventive impact. But this development is open-ended, a progressively increasing amount of service is provided, yet *responsibility for its effectiveness* is basically evaded. Service does not, by itself, lead to prevention or establish control, is usually without focus and direction and, most important, is *without responsibility for results*. Specifically, what are the problems and their proportions? How are these conditions modified, controlled or improved? It is essential that the critical factors be isolated in order to enhance the impact of our services and techniques.

"Then there is the concept of accountability, a most challenging proposal, though, generally, a most unwelcome and unpopular notion among clinicians who are prone to be ego oriented rather than task oriented. A statement of activities is not synonymous with accountability. Yet, without defined goals and accountability, control and direction are lost and prevention fades into obscurity. Moreover, and this is seldom

<sup>20</sup>Ibid.

<sup>21</sup>Montacute, C., *op. cit.*, p. 254.

<sup>22</sup>Klineberg, O., The problem of evaluation, *UNESCO, Int. Soc. Sci. Bull.* 7:346-352, 1955.

<sup>23</sup>"The current status of Research in Public Health Administration perhaps resembles that of the optimistic small boy who, on entering an evil-smelling building, exclaimed: 'With all that manure around, there's just got to be a pony!' All administrative studies have detected the manure, a few have identified the surrounding footprints, but rarely have they caught and mounted the pony." Wylie, C. M., *Research in Public Health Administration Project, Selected Recent Abstracts*, Baltimore: School of Hygiene and Public Health, The Johns Hopkins University, 1963.



appreciated in the field, to the public official accountability is a reality of everyday, whether knowledge is incomplete, adequate or even accurate; answers, often critical, must be given."<sup>24</sup>

### *Selection of Inappropriate Criteria of Effectiveness*

Historically, the development of statistical indices for the appraisal of organized community health activities progressed from indices of mortality and morbidity to data on the volume of facilities and services.<sup>25</sup> The uncritical comparison of data on community facilities and services with "standards established by experts" has been described as indicating that public health workers still retain faith in someone's ability to achieve complete understanding of the means of meeting community health problems and could lead to a smug satisfaction with conditions which satisfy current opinions.<sup>26</sup>

A simple counting of service given is not evaluation.<sup>27</sup> This does not recognize the distinction between effort and effect or that sheer activity is no measure of achievement toward a goal.<sup>28,29</sup>

"...an extensive series of experiments, 'to test the often assumed hypothesis that increase in nursing staff would effect changes in nursing care in such way as to improve patient welfare. The nursing activity changes effected...were judged against...clinical measures, such as number of fever days, number of post-operative days; scaled measures, such as patient's mental attitude, patient's mobility; patient activity sampling measures, such as per cent of time spent in bed...No improvement in patient welfare was revealed."<sup>30,31</sup>

### *The Non-publication of Completed Evaluations*

According to Jahoda and Barnitz many evaluations are never published. This adds to the cost of current evaluation and action. Much work could be condensed, many mistaken approaches avoided, if every program director realized that other people might benefit from what he has learned in evaluating his own efforts.<sup>32</sup>

<sup>24</sup>Dorken, H., Behind the scenes in community mental health, *Amer. J. Psychiat.* 119:328-335, 1962.

<sup>25</sup>Ciecco, A., On indices for the appraisal of health department activities, *J. chron. Dis.* 11:509-522, 1960.

<sup>26</sup>*Idem.*

<sup>27</sup>Hilleboe, H.E., Research in Public Health Practice, *op. cit.*

<sup>28</sup>Hilleboe, H. E., Improving performance in public health, *Hlth. News*, (New York State) 40:7-18, 1963.

<sup>29</sup>"Increase in number of beds in psychiatric hospitals is no measure of improvement of services." World Health Organization, Tenth Report of the Expert Committee on Mental Health, *op. cit.*, p. 19.

<sup>30</sup>Iowa University Nurse Utilization Project, an Investigation of the Relation Between Nursing Activity and Patient Welfare, Iowa City, State University of Iowa, 1960, abstracted in *Methodology in Evaluating the Quality of Medical Care*, University of Pittsburgh Press, 1962.

<sup>31</sup>It is similarly assumed that increasing the number of personnel on a ward will increase the amount of direct nursing care provided patients. This was not substantiated in a study reported by Nakagawa, H., and Hudziak, B., Effect of increases in numbers of nursing personnel on utilization of time in a psychiatric unit, *Nursing Research* 12:106-108, 1963.

<sup>32</sup>Jahoda, M., and Barnitz, E., The nature of evaluation, *UNESCO Int. Soc. Sci. Bull.* 7:353-364, 1955.

### *The Non-application of Evaluation*

While evaluation enables the administrator to make progressive adjustments in order to reach his goals more effectively,<sup>33</sup> such adjustments are difficult to initiate. Fleck states that if personal goals of prestige, salary and influence are adversely affected by evaluation, the program adjustments may not take place. In addition program operators are more often prone to expend energy on starting new operations than changing or discontinuing old ones since rewards tend to accrue to the top executive and not to the person who redirects or stops a program.<sup>34</sup>

Unless the findings are applied, the evaluation process becomes a mere exercise in measurement, a pleasant interlude between the expert dogmas, "enlightened" experience and cook-book training which will then continue to guide programs.<sup>35</sup>

"Institutions which are man-made may be man-changed. We need to be bold in asking critical questions regarding the origin and change of our public health agencies. Even though our evaluations may not yield final answers, they may at times yield findings more valid than the evidence on which the institution was originally established."<sup>36</sup>

### **The Need for Independent Evaluation**

Although evaluation should be an integral part of any health program, it is also essential that the personnel engaged in evaluation be impartial and independent. Fleck describes these aspects in regard to the New York State Department of Health.

"In our own and in other state organizations, the relevancy of any matter as a measure of effectiveness of the medical bureaucracy is determined by the medical judgement of the person least likely to view the operation without bias, the expert in charge of the program.

"Evaluation, even when done within the privacy of the bureaucratic family, has as its purpose the checking of the program experience against the epidemiological rationale. This process can theoretically be done within the program family, but unfortunately it presents too great difficulties. The first of these is that the program director is personally interested in the outcome. The indicated revisions affect his own personal goals of prestige, salary and influence. If the effect is adverse the probability that changes will be made in a timely fashion is almost nil because of the conflict of interest.

"In setting up our evaluation team we give recognition to the need for an impartial approach. At the same time we recognize that the requisite familiarity with public health administration dictated that we have someone who could talk the language and get to the core of the program. For this reason the department head established a special position within the executive branch. It is the incumbent's responsibility to conduct a disinterested inquiry into Health Department activities to control disease. This incumbent is basically not personally involved because he is not in charge of the

<sup>33</sup>Klineberg, O., *op. cit.*, p. 347.

<sup>34</sup>Fleck, Andrew C., Jr., *Evaluation as a logical process, op. cit.*

<sup>35</sup>James, G., Program planning and evaluation in modern city health department, *Am. J. publ. Hlth.* 51:1828-1840, 1961.

<sup>36</sup>Knutson, A. L., The influence of values on evaluation in *Hlth Educ. Monogr.* No. 3, 1959. pp. 25-31.

program under study. To be realistic, however, he is still part of the medical bureaucracy, still subject to departmental custom and is affected by the quality and acceptability of his evaluation."<sup>37</sup>

Other arguments for this independence are presented by Jahoda and Barnitz:

"*The evaluation staff*—the main decision here is the choice between specialists engaged to do evaluation and the use of persons on the programme staff. In favour of the second alternative it is often said that no 'outsider' can easily acquire the knowledge of the programme necessary for evaluation. This is a cogent argument.

"However, the arguments *against* using the same staff in action and evaluation are even stronger. The most important argument is that the staff member, if he is any good at all, must be devoted to his job and convinced that his activities have social usefulness. The evaluator must be prepared to discover that the programme may be ineffective or even harmful. It is unlikely, to say the least, that the same person can simultaneously hold such different attitudes. By and large, then, it is preferable to entrust evaluation to a person who has no other obligations toward the programme."<sup>38</sup>

Cassidy also emphasized the need for continuing non-governmental evaluation:

"Non-official research is also essential, both as a contribution towards immediate planning for social security and as a continuing service. For it can be frank and critical on points that the official report must gloss over lightly. It does not have to pass the censorship of the government in power, which, however good its intentions, can scarcely afford to permit the publication of material that would be politically embarrassing. The universities are the ideal agencies to sponsor this kind of work; but they need much more in the way of public support and endowment than they have had thus far to enable them to give serious consideration to anything very special in the way of social research."<sup>39</sup>

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<sup>37</sup>Fleck, A. C., Jr., *op. cit.*

<sup>38</sup>Jahoda, M., and Barnitz, E., *The nature of evaluation, op. cit.*

<sup>39</sup>Cassidy, H. M., *Social Security and Reconstruction in Canada*, Toronto: The Ryerson Press, 1943.

**APPENDIX 1-2**  
**PATIENTS IN OPEN-DOOR WARDS**  
**OF PUBLIC MENTAL HOSPITALS,**  
**CANADA AND PROVINCES, DECEMBER 31, 1960**

	Patients in Institutions	Patients in Open-door Wards	
	N = 100%	N	Per cent
CANADA .....	50,249	14,045	28.0
Newfoundland .....	928	363	39.1
P.E.I. ....	303	105	34.7
Nova Scotia .....	2,242	253	11.3
New Brunswick .....	1,839	753	40.9
P.Q. ....	17,719	2,498	14.1
Ontario .....	15,507	5,747	37.1
Manitoba .....	2,765	921	33.3
Saskatchewan .....	3,221	749	23.3
Alberta .....	2,689	793	29.5
B.C. ....	3,036	1,968	64.8

Source: Dominion Bureau of Statistics, *Mental Health Statistics, Supplement: Patients in Institutions, 1960, op. cit.*

**APPENDIX 1-3**  
**FEDERAL MENTAL HEALTH GRANT EXPENDITURES, BY TYPE OF PROGRAMME,**  
**1948 - 1958**

	1948 - 1953 <sup>1</sup>	1948 - 1958 <sup>2</sup>
Mental institutions (staff and equipment) .....	48.9%	52%
Psychiatric units in general hospitals .....	9.2	11
(Some personnel and equipment of psychiatric units employed part-time in out-patient clinics)		
Out-patient and community clinics .....	11.2	12
(Some personnel and equipment of out-patient clinics employed part-time in in-patient treatment)		
Other mental health services .....	3.8	3
(Primarily for employment of personnel in provincial mental health divisions and for mental health education)		
Research .....	6.9	8
Training .....	20.0	14
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

<sup>1</sup> Department of National Health and Welfare, Research Division, *Mental Health Services in Canada, op. cit.*

<sup>2</sup> Department of National Health and Welfare, *Canada and World Mental Health Year, op. cit.*



## APPENDIX 1-4

## THE PLANNING OF MENTAL HEALTH SERVICES IN THE UNITED STATES, 1963

In the United States, considerable emphasis has been placed on the need for *planning* community mental health services.

"The most immediate and pressing need, in relation both to strengthening community mental health programs and to effecting better relations between them and other services, is for coordinated planning.

"...Particular attention should be given to the logistics of mental health and related services. What levels of treatment are needed, and by what community services, in relation to various types of problems? What is the ecology or epidemiology of manifest problems, of stress points, of coping techniques, and of sources of mental health? How can existing agencies and other resources in the community evolve as a more effective system for reduction of disability and the production of ability?"<sup>40</sup>

Some of the basic issues involved in the planning of mental health services in the United States were clearly defined by the White House staff in January 1963.<sup>41</sup>

Should the emphasis be on comprehensive mental health centers as a substitute for State mental hospitals?

What is to be the future role of the State mental hospital?

Who will run the comprehensive community mental health center?

How can the operating cost of the community mental health center be financed?

What is to be the relationship of community mental health centers to general hospital and other resources of the community?

Will manpower be available to achieve the goal of 500 centers by 1970 and possibly 2,000 centers by 1980?

A Federal Grant-in-Aid Program was initiated in 1963 to assist such planning. The Guidelines<sup>42</sup> included the following stipulations:

"...Such community based mental health programs should provide a broad spectrum of mental health services emphasizing a continuum of care, should assure coordination among all relevant community resources, and should work toward the prevention of mental illnesses, and for promotion of mental health.

<sup>40</sup>United States Department of Health, Education, and Welfare, Report of the Surgeon General's Ad Hoc Committee on Mental Health Activities, *Mental Health Activities and the Development of Comprehensive Health Programs in the Community*, Washington: United States Government Printing Office, 1963.

<sup>41</sup>Brown, B. S. (National Institute of Mental Health), The Impact of the New Federal Mental Health Legislation on the State Mental Hospital System, presented at the Northeast State Governments Conference, Hartford, Conn., Oct. 22, 1964, dupl., n.d.

<sup>42</sup>National Institute of Mental Health, *Guidelines for the Federal Grant-in-Aid Program to support Mental Health Planning* (preliminary copy), dupl., Washington: Jan. 22, 1963.

"...Planning may be defined as the process by which a state or community orders the steps toward explicit goals. This process includes development and use of means for gathering data, the integration and analysis of the information, the selection of goals, priorities and methods, and the allocation of available resources to achieve the selected goals.

"...The planning proposal should indicate clearly, not only how such information will be secured for immediate use in development of a comprehensive plan, but also should concern itself with the means and mechanisms which will be used to incorporate such data collection systematically and permanently.

"...Provision should be made for the continuous program evaluation and replanning required to meet changes as these develop."

Further requirements specified:<sup>43</sup>

- (i) The plan should be concerned with the entire state program rather than that of any one agency.
- (ii) It should take into account the mental health needs of all people in all parts of the state.
- (iii) The range of services to be considered should include prevention, screening, diagnosis, treatment, rehabilitation, consultation, research, training, and health education.
- (iv) The planning process should include key state health and mental health agencies, mental health associations, medical and other professional societies, and groups from such related fields as education, welfare, corrections, and health facilities construction agencies.
- (v) The proposal should describe the way the state intends to assess and evaluate its mental health problems, resources, needs, and current activities.
- (vi) The proposal and budget should indicate the relationship of specific activities to the establishment of a central planning process.
- (vii) The proposal should outline intended administrative and technical procedures and provisions for staffing.

Some of the factors to be considered in assessing priorities for the construction of mental health facilities were:<sup>44</sup>

- (i) The size of the population group to be served.
- (ii) Comprehensiveness of the proposed program; provision of a broad spectrum of service.
- (iii) Inclusion in or formal affiliation with a large medical center.

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<sup>43</sup>Glasscote, R., and Kanno, C., *The Plans for Planning, A Comparative Analysis of the State Mental Health Planning Proposals*, Washington, D.C.: Joint Information Service of the American Psychiatric Association and the National Association for Mental Health, Oct. 1963.

<sup>44</sup>United States Department of Health, Education, and Welfare, Report of the Surgeon General's Ad Hoc Committee on Planning for Mental Health Facilities, *Planning of Facilities for Mental Health Services*, op. cit.

- (iv) Participation in an approved training program.
- (v) Coordination or consolidation of facilities with other mental health facilities or programs.
- (vi) Formal affiliation with a general hospital.
- (vii) Program emphasis on prevention, early diagnosis and treatment.
- (viii) Provision of a wide range of clinic services.
- (ix) Relative need for service as compared to other categories of mental facilities.

## APPENDIX 1-5

**QUESTIONS REGARDING EVALUATION FOR DIRECTORS  
OF MENTAL HEALTH PROGRAMS**

A review of the 1955-1964 literature on mental health program evaluation by Bloom<sup>45</sup> succinctly lists a number of questions regarding evaluation for directors of mental health programs and their staffs:

i. Do you have an adequate understanding of the demographic characteristics of the population eligible to receive your services and of the community resources currently available?

ii. Do you know what significant differences exist between the population eligible for your services and the population which actually applies for and receives your services?

iii. Do you have a clear definition of your services, so that you can reliably group patients according to the services they receive?

iv. Do you have a clear definition of the characteristics your services are designed to influence, so that you can reliably group patients according to these characteristics?

v. Do you know, from a theoretical point of view, in what manner each of the services you offer is supposed to influence each of the characteristics you are attempting to influence?

vi. Have you assessed the evidence which currently exists regarding the effectiveness of your techniques in influencing the characteristics with which you are dealing?

vii. Do you contrast the results of your services by comparing your treated groups with suitably matched untreated or differently treated groups?

viii. Are objectives, or goals, established for each patient and for your program as a whole?

ix. Have you reviewed your statement of program objectives recently to see if it reflects your current program emphasis?

x. Have you and your staff discussed and labelled those objectives which are not directly concerned with prevention and treatment, that is, those objectives which bear on organizational maintenance and related areas?

xi. Have you selected criteria and indices for the assessment of each of your program objectives?

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<sup>45</sup>Bloom, B. L., *Mental Health Program Evaluation: 1955-1964*, dupl., National Institute of Mental Health, United States Public Health Service, Denver, Colorado, n.d.



xii. Can the extent to which you are attaining your program objectives be reliably judged?

xiii. If clinical judgment is utilized to study patient characteristics or progress, whether by using formal rating instruments or not, is the reliability and validity of these judgments effectively explored?

xiv. Do you make systematic follow-up studies to evaluate the duration of changes in the treated population?

## APPENDIX 1-6

## THE ROLE OF PREVENTION

"It goes without saying that any scheme which to a great extent ignores the questions of prevention and early treatment falls far short of modern requirements."<sup>46</sup>

It is evident that the mental health problems of the world can never be adequately dealt with by therapeutic methods.<sup>47</sup> Bower<sup>48</sup> has compared the *need* to care and treat the mentally ill and the *problem* of reducing the development of the illness in the first place, to an old Cornish test of insanity consisting of a sink, a tap of running water, a bucket and a ladle. The bucket was placed under the tap of running water and the subject asked to bail the water out of the bucket with the ladle. If the subject continued to bail without paying some attention to reducing or preventing the flow of water into the pail, he was judged to be mentally incompetent. Similarly, any society that attempts to provide more and larger buckets to contain the problems of that society, without simultaneously attempting to reduce the flow, might be equally suspect. The 1937 report on the British Health Services emphasized that the nation needed sickness services, but a nation which regarded them as a substitute for health services was going to find the confusion expensive in money and suffering.<sup>49</sup>

The objectives of psychiatry, as in any branch of medicine, are to prevent disease, failing that, to cure or arrest the progress of disease, and failing that, to prolong life and relieve suffering.<sup>50-51</sup> These various objectives are all related to some aspect of prevention.<sup>52</sup>

*Primary prevention* is centred about steps to obviate the development of disease in susceptible populations. Methods employed include both health promotion and specific protection against disease when this is known.

*Secondary prevention* is based upon early diagnosis of illness and prompt treatment in order to shorten duration, reduce symptoms, limit sequelae and minimize contagion; that is, the impact of mental illness upon others in the family and the community.

*Tertiary prevention* is concerned with instances of illness that are irreversible; its goals have the limitation of disability to the extent possible and the promotion of the rehabilitation of the individuals so afflicted. For example, in the case of the hospitalized patient, tertiary prevention is concerned with preventing or reversing social chronicity so frequently induced by institutionalization itself.

<sup>46</sup>Canadian National Committee for Mental Hygiene, *Mental Hygiene Survey*, Province of Saskatchewan, *op. cit.*

<sup>47</sup>World Health Organization, *First Report of the Expert Committee on Mental Health*, *WHO Techn. Rep. Ser.*, Ser. 9, 1950, p. 8.

<sup>48</sup>Bower, E. M., Primary prevention of mental and emotional disorders: A conceptual framework and action possibilities, *Amer. J. Orthopsychiat.* 33:832-848, 1963.

<sup>49</sup>Political and Economic Planning, *Report on the British Health Services*, 1937, p. 395.

<sup>50</sup>Encyclopedia Britannica, Article on Psychiatry, 13th Edition, 1926.

<sup>51</sup>Gruenberg, E. M., Application of control methods to mental illness, *Am. J. publ. Hlth.* 47: 944-952, 1957.

<sup>52</sup>Eisenberg, L., & Gruenberg, E. M., The current status of secondary prevention in child psychiatry, *Amer. J. Orthopsychiat.* 31: 355-367, 1961.

Primary prevention includes both the "eradication" of illness, and the reduction of population-differentials in morbidity. Although no specific protection is known as yet for the psychoneuroses or functional psychoses,<sup>53</sup> more knowledge is available about shortening the period of disability and reducing handicap. Psychoses of old age may be prevented by nutritional, psychological, and social measures. Organic psychoses of known etiology may be prevented by efforts directed at the etiological agent—poison, infection, trauma, or nutritional deficiency. General measures for promotion of mental health<sup>54</sup> would include support in times of stress,<sup>55</sup> prevention of maternal deprivation, and improvement of child rearing practices.

Querido stresses the pernicious relation between the duration of the disorder and the effort necessary to meet it. When major psychoses are detected and treated early and vigorously, readaptation may be reached within a few months; when initially neglected, readaptation may take years or may never be attained. Therefore case detection in early stages, by close contact with other general health and social agencies, by consultation services, out-patient facilities, general hospital psychiatric wards and other open hospital services, will be able to fulfil the requirements of mitigating or terminating the disease once it has become manifest.<sup>56</sup> This secondary prevention involves the early recognition of disorder and the institution of appropriate treatment. Considerable integration between case finding and treatment is required.

Such integration of preventive and curative activities has been regarded as a basic health doctrine, which should go beyond policies and regulations and live in the minds and conduct of officials.<sup>57</sup>

To an increasing extent there has been a movement to include mental health activities within the scope of public health services on the basis of public health's traditional role in preventive and community services. If the general segregation of preventive medicine from therapeutic or curative medicine persists, it is *unlikely* that the care of psychiatric disabilities by public health agencies would assist the integration of psychiatry within medicine. Primary

<sup>53</sup>"...our knowledge is still very inadequate, not only as to the effectiveness of existing techniques, but also as to the best method of successfully undertaking the various activities which we now recognize to be necessary and desirable..." World Federation for Mental Health, *Mental Health in International Perspective*, London: The Federation, 1961, p. 45.

<sup>54</sup>"...even though no specific illness can be shown to be made rarer thereby." American Public Health Association, *Mental Disorders: A Guide to Control Methods*, op. cit., p. 57.

<sup>55</sup>"Consultation and inservice training to other agency personnel on how to use good mental health principles in their agency's work and how to manage by themselves some of the emotional problems that they see in their work, such as the emotional concomitants of other disabilities, are particularly important. They should potentially cut down on the referrals to direct mental health programs. The emphasis should be not so much on assisting them [health and welfare workers] to treat the psychiatric cases which appear in their midst, although the early recognition and referral is important, but rather how to do the generic health and welfare job in such a way that stress is relieved and the person assisted by the experience. There is widespread and probably well grounded belief that many illnesses may be prevented through meeting stress situations early." United States Department of Health, Education, and Welfare, Surgeon General's *Ad Hoc Committee on Mental Health Activities, Mental Health Activities and the Development of Comprehensive Health Programs in the Community*, op. cit.

<sup>56</sup>Querido, A., op. cit., p. 638.

<sup>57</sup>Pan American Health Organization, *Annual Report of the Director of the Pan American Sanitary Bureau*, Regional Office of the World Health Organization, 1963, Official Documents No. 56, Washington: The Organization, 1964.



prevention has been described as being more likely achieved through direct personal relationship of the practitioner with his patients.<sup>58</sup> Any cleavage between preventive and therapeutic activities obstructs secondary prevention.<sup>59</sup>

According to McKeown:

"It should be noted that there was no real divorce between preventive and curative effort so long as attention was fixed primarily on infectious disease. It was recognized that control of infection depended upon specific preventive and curative measures as well as upon manipulation of the environment, and both were accepted as public responsibilities. The division was created early in the present century when the public services were extended further into the field of personal care. After prolonged debate it was decided that the new services—concerned particularly with the welfare of mothers and preschool and school children—should be preventive. This created public-health services, locally administered, in which responsibility for preventive personal care was joined with that for the environmental services. Both were separated from curative services, which were at that time almost everywhere privately financed. This established the division between preventive and curative medicine, which has been retained in countries such as Great Britain, where all medical services are now publicly financed.

"Such an arrangement has manifest disadvantages. It has long been recognized that the finding of defects by a school medical officer does not ensure their correction by another doctor whose responsibilities are restricted to the sick child. A prenatal service divorced from delivery and postnatal care has conspicuous disadvantages. But the traditional pattern of service will be even less appropriate in relation to the main problems to be expected in the future: prenatal mortality; mental illness; and disease and disability associated with aging.

"These considerations suggest that the proper alignment of the preventive personal services today is with curative medicine. This would place the division between personal medical care (all types) and the environmental services, rather than between preventive and curative measures, as at present. It should not mean the end of medical interest in the environment. But in many countries the services have now reached a high level of efficiency, at which they can be entrusted safely to the supervision of a nonmedical staff, advised when necessary by medical consultants."<sup>60</sup>

Preventive and therapeutic medicine are both described as phases in a continuum of medical-care services with the preventive component having no useful reason for being located in a city hall or court house. The primary locus of all personal health services is claimed to be the community general hospital.<sup>61</sup> Similar integration of preventive and curative activities is imperative within psychiatry.<sup>62</sup>

<sup>58</sup>"I am not concerned for the moment with major issues of environmental control such as are involved in dealing with atmospheric pollution, poor housing, water fluoridation and certain aspects of accident prevention. I am dealing with those aspects of prevention which are more intimately associated with medical care. As medical technology has become more effective and as specific acute infections come under control, the trend is for this kind of preventive medicine to become more closely associated with clinical medicine . . . Primary prevention is to a great extent a matter of achieving behavioural changes which are most likely to be accomplished through a direct personal relationship such as the general practitioner can have with his patients." Brotherston, J. H. F., Medical care investigation in the health services, in *Towards a Measure of Medical Care: Operational Research in the Health Services*, op. cit.

<sup>59</sup>Logan, R. F. L., Studies in the spectrum of medical care in *Problems and Progress in Medical Care*, McLachlan, G. (Ed.), op. cit., pp. 3-51.

<sup>60</sup>McKeown, T., Priorities in preventive medicine, *New Engl. J. Med.* 264:594-599, 1961.

<sup>61</sup>Frechette, A. L., Local and state health departments: Their relation to medical practice—present and potential, *New Engl. J. Med.* 269:1121-1126, 1963.

<sup>62</sup>Querido, A., op. cit., Querido cites MacKintosh's statement "that preventive and curative medicine have reached the stage where they are no longer separable".



APPENDIX 2-1

**SCHEDULES SUBMITTED BY MENTAL HOSPITALS TO  
DOMINION BUREAU OF STATISTICS**

These schedules were to be completed at the end of the calendar year by mental hospitals and training schools operated solely for the care of in-patients and which were recognized as such by a federal government agency or by the government of the province in which they were located.

ANNUAL RETURN OF MENTAL HOSPITALS – SCHEDULE I

Name of hospital and address \_\_\_\_\_

1. OWNERSHIP AND TYPE

- (a) Ownership ☐ Federal ☐ Provincial ☐ Municipal  
☐ Lay corporation ☐ Religious organization ☐ Other private  
 (b) Type of hospital ☐ Mental hospital ☐ Psychiatric hospital ☐ Epilepsy hospital  
☐ Training school ☐ Other  
 (c) Standard bed capacity .....  
 (d) Number of patients in hospital at December 31, 1954.....  
 (e) Number of patient days during 1954.....  
 (f) Average daily in-patient population during 1954.....  
 (g) Number of patients under treatment for tuberculosis at  
 December 31, 1954.....

2. SERVICES

(a) Organized services –

- Psychiatric ☐ Psychosurgery ☐ Audio-visual ☐ Psychotherapy  
☐ Psychology ☐ Occupational therapy ☐ Recreational therapy  
☐ Social service ☐ After care ☐ Children's unit  
☐ Out-patient department  
☐ General medical ☐ General surgery ☐ Neurosurgery  
☐ Neurology ☐ Eye, ear, nose and throat ☐ Paediatric  
 General ☐ Geriatric ☐ Tuberculosis ☐ Other communicable diseases  
☐ Dentistry ☐ Dietetics

(b) Service Activities –

- Investigation ☐ Clinical pathological ☐ Electrocardiography ☐ Electroencephalography  
☐ Psychological ☐ Social service ☐ X-ray  
☐ X-ray therapy ☐ Leucotomy ☐ ECT  
 Treatment ☐ Insulin ☐ Planned psychotherapeutic interviews ☐ Physiotherapy  
☐ Fever ☐ Hydro ☐ Social casework

3. EDUCATIONAL FACILITIES

(a) Medical education –

- |   | Yes                      | No                       |
|---|--------------------------|--------------------------|
| Is the hospital affiliated with a medical school for undergraduate education.....                       | <input type="checkbox"/> | <input type="checkbox"/> |
| Is the hospital approved by the Canadian Medical Association for affiliated rotating internships.....   | <input type="checkbox"/> | <input type="checkbox"/> |
| Is the hospital approved by the Royal College of Physicians and Surgeons of Canada for residencies in – |                          |                          |
| Psychiatry .....  | <input type="checkbox"/> | <input type="checkbox"/> |
| Neurology.....  | <input type="checkbox"/> | <input type="checkbox"/> |
| Other.....  | <input type="checkbox"/> | <input type="checkbox"/> |

(b) Nurse education –

- |   |                          |                          |
|---|--------------------------|--------------------------|
| Has the hospital an approved school of nursing .....                                  | <input type="checkbox"/> | <input type="checkbox"/> |
| Does the school of nursing provide formal training for psychiatric nurses .....       | <input type="checkbox"/> | <input type="checkbox"/> |
| Are graduates eligible for registration as psychiatric nurses .....                   | <input type="checkbox"/> | <input type="checkbox"/> |
| Number of nurses graduated from the school of nursing during 1954 .....               |                          |                          |
| Is affiliation provided for general hospital student nurses .....                     | <input type="checkbox"/> | <input type="checkbox"/> |
| Does the hospital provide organized post-graduate courses in psychiatric nursing..... | <input type="checkbox"/> | <input type="checkbox"/> |
| Does the hospital provide formal training for – orderlies or attendants .....         | <input type="checkbox"/> | <input type="checkbox"/> |
| – nursing aides .....   | <input type="checkbox"/> | <input type="checkbox"/> |

Annual return of mental hospitals, 1954

4. PERSONNEL AT DECEMBER 31, 1954

	Part Time		Full Time	
	Male	Female	Male	Female
(a) Nursing staff -				
Psychiatric nurses.....				
Other graduate nurses - Registered.....				
- Not registered.....				
Student nurses (incl. affiliate) - For psychiatric.....				
- For other graduate...				
Nursing aides - Trained.....				
- Untrained.....				
Orderlies and attendants.....				
Other nursing staff.....				
(b) Other personnel -				
Administration			Part Time	Full Time
Medical superintendent.....				
Assistant medical superintendent.....				
Administrator.....				
Matron or superintendent of nurses.....				
Other administrative staff.....				
Professional care (excl. nurses)				
Doctors - Clinical director.....				
- Staff - Certificated specialists.....				
- Physicians.....				
- Residents.....				
- Interns.....				
- Consulting - Certificated specialists.....				xxx
- Other.....				xxx
Dentists.....				
Psychologists.....				
Pharmacists - Registered.....				
- Other.....				
Technicians - Laboratory - Certified.....				
- Other.....				
Radiology - Registered.....				
- Other.....				
E E G technicians.....				
Other technicians.....				
Therapists - Occupational - Registered.....				
- Other.....				
- Recreational - Qualified.....				
- Other.....				
- Other therapists.....				
Academic teachers.....				
Social workers - Psychiatric.....				
- Other qualified.....				
- Other.....				
Dietitians - Certified.....				
- Qualified.....				
- Other.....				
Chaplains.....				
Other staff for professional care.....				
Other staff -				
Dietary.....				
Laundry.....				
Housekeeping, bedding and linen.....				
Building maintenance.....				
Garden and farm.....				
All other employees.....				
TOTAL PERSONNEL (excl. nursing staff).....				

DOMINION BUREAU OF STATISTICS

ANNUAL RETURN OF MENTAL HOSPITALS – SCHEDULE 2

Name of hospital and address .....Year ended .....19...

OPERATING STATEMENT

A. Revenue

- 1. Grants and payments: Federal .....  
Provincial .....  
Municipal.....
- 2. Received from or on behalf of paying patients .....
- 3. Received from other sources.....
- 4. Total Operating Revenue.....

B. Expenditure –

- 5. Gross salaries and wages .....  
Less: deductions for board, etc.....
- 6. Provisions (food).....
- 7. Fuel, power, light and water .....
- 8. Other operating expenditures.....
- 9. Total Operating Expenditures .....

SOURCE AND APPLICATION OF PLANT FUNDS

A. Funds provided –

- 1. Grants: Federal .....  
Provincial.....  
Municipal .....
- 2. Mortgages or other long-term borrowings .....
- 3. Other sources.....
- 4. Total Plant Funds Provided .....

For new  
construction or  
additions to plant

For  
retirement  
of debt

B. Funds expended –

- 5. Land and improvements to grounds.....
- 6. Buildings (including permanent fixtures).....
- 7. New furniture and equipment .....
- 8. Retirement of long-term debt .....
- 9. Total Plant Funds Expended.....



APPENDIX 2-2

SCHEDULES SUBMITTED BY PSYCHIATRIC UNITS OF GENERAL HOSPITALS TO DOMINION BUREAU OF STATISTICS

DOMINION BUREAU OF STATISTICS  
Institutions Section

ANNUAL RETURN OF PSYCHIATRIC UNITS

Name

Address

Year ended Dec. 31, 195

Name of the hospital of which this unit is a part

1. Ownership:

☐ Federal

☐ Provincial

☐ Municipal

☐ Lay corporation

☐ Religious organization

☐ Other and/or private

2. Standard bed capacity

3. Movement of patients:

(a) Patients in the unit at January

(b) First admissions during the year

(c) Re-admissions during the year

(d) Transfers received from other psychiatric institutions during the year

(e) Discharges during the year

(f) Deaths during the year

(g) Transfers sent to other psychiatric institutions during the year

(h) Patients in the unit at December 31

4. Patient days during the year

5. Average daily population

6. Service activities within the unit or the parent hospital:

☐ Out-patient department

☐ Psychological investigation

☐ Leucotomy

☐ Occupational therapy

☐ Social service

☐ Planned psychotherapeutic interviews

☐ After care

☐ Electroencephalography

☐ Hydro

☐ Recreational therapy

☐ Insulin coma

☐ ECT

☐ Children's unit

☐ Insulin sub-coma

☐ Physiotherapy

7. Educational facilities:

For physicians—

(a) Is the hospital affiliated with a medical school for undergraduate education?

(b) Is the unit utilized by the medical school for undergraduate education?

(c) Is the unit utilized for affiliated rotating internships?

(d) Is the hospital approved by the Royal College of Physicians and Surgeons of Canada for residencies in psychiatry?

For psychologists—

(e) Is the unit affiliated with a university department of psychology for formal supervised training of student psychologists?

(f) Number of such students receiving training during the year

Yes

No

(OVER PLEASE)

7. Educational facilities: (continued)

For nurses—

(g) Is the unit utilized for formal psychiatric training of undergraduate nurses?..... Yes ☐ No ☐

(h) Number of student nurses trained in the unit during the year ..... \_\_\_\_\_

(i) Does the hospital provide organized post-graduate courses in psychiatric nursing? .... ☐ ☐

(j) Number of graduate nurses completing post-graduate courses during the year..... \_\_\_\_\_

For social workers—

(k) Is the unit approved by a school of social work for training?..... ☐ ☐

(l) How many such students received such training during the year? ..... \_\_\_\_\_

8. Personnel:

(a) Nursing staff—

Psychiatric nurses ..... \_\_\_\_\_

Other graduate nurses — Registered..... \_\_\_\_\_

Not registered..... \_\_\_\_\_

Student nurses (incl. affiliate) — For psychiatric ..... \_\_\_\_\_

For other graduate..... \_\_\_\_\_

Nursing aides — Trained ..... \_\_\_\_\_

Untrained..... \_\_\_\_\_

Orderlies and attendants ..... \_\_\_\_\_

Other nursing staff ..... \_\_\_\_\_

(b) Medical and technical personnel

Doctors — Certificated specialists..... \_\_\_\_\_

Other physicians ..... \_\_\_\_\_

Residents ..... \_\_\_\_\_

Interns ..... \_\_\_\_\_

Psychologists ..... \_\_\_\_\_

Therapists — Occupational — Registered ..... \_\_\_\_\_

Other..... \_\_\_\_\_

Recreational — Qualified ..... \_\_\_\_\_

Other..... \_\_\_\_\_

Other therapists..... \_\_\_\_\_

Social workers — Psychiatric ..... \_\_\_\_\_

Other qualified ..... \_\_\_\_\_

Other..... \_\_\_\_\_

(c) Clerical staff ..... \_\_\_\_\_

Number at December 31

Male Female

Number at December 31 Hours worked per week

APPENDIX 2-3

**SCHEDULES SUBMITTED BY MENTAL HEALTH CLINICS AND  
OUT-PATIENT DEPARTMENTS TO DOMINION BUREAU OF STATISTICS**

This schedule was distributed by provincial authorities to the clinics and out-patient departments recognized as such by provincial government, and returned to Dominion Bureau of Statistics through provincial channels.

## DOMINION BUREAU OF STATISTICS

## Institutions Section

ANNUAL RETURN OF MENTAL HEALTH CLINICS  
AND OUT-PATIENT DEPARTMENTS

Name \_\_\_\_\_

Address \_\_\_\_\_

Year ended Dec. 31, 195 \_\_\_\_\_

Auspices under which operated \_\_\_\_\_

1. Type of patient served: ☐ Adults only ☐ Children only  
☐ Adults and children

2. Number of sessions held per week..... \_\_\_\_\_

## 3. Personnel:

(a) Psychiatrists .....

(b) Psychologists .....

(c) Social workers .....

(d) Nurses.....

(e) Special therapists .....

(f) Clerical workers .....

Number	Hours per week	Total interviews during year
		x x x

## 4. Patients during the year:

(a) Number of this year's patients who had attended  
this clinic or department in a previous year..... \_\_\_\_\_

(b) Number who had not done so..... \_\_\_\_\_

(c) Total number of patients during this year..... \_\_\_\_\_



ADMISSION CARD

9002-8  
2-9-52

First  
☐ Admission

☐ Readmission

☐ Transfer

☐ Male

☐ Female

Mental Institution  
Admission Card

Name of Patient

Date of Admission 19\_\_ Case No. \_\_

1. Residence

(City, town, village, rural municipality) (County)

2. Age

Date of Birth

☐ Single ☐ Married ☐ Widowed

☐ Divorced ☐ Separated

3. Marital Status

☐ Single ☐ Married ☐ Widowed

☐ Divorced ☐ Separated

4. Number of Children

5. Country of Birth

Patient

Canada ☐ Other ☐

Father

☐ ☐

Mother

☐ ☐

6. Year of Arrival in Canada

Canadian by

☐ Canadian Born ☐ Naturalization

☐ Other British ☐ Other

7. Citizenship

☐ Canadian Born ☐ Naturalization

☐ Other British ☐ Other

8. Origin

☐ English ☐ French

☐ Irish ☐ Scottish

Other (Specify) \_\_\_\_\_

9. Years of Schooling

10. Religion

11. Occupation

12. Industry

13. Method of Admission

☐ Voluntary ☐ Lieut.-Governor

☐ Certification ☐ Other

warrant of

14. Source of Admission (Check one only)

☐ Private Physician ☐ Clinic Agency ☐ General Hospital

☐ Welfare Institution ☐ Penal Institution ☐ Other

☐ Transfer from other Mental Hospital

(a) Name of Hospital \_\_\_\_\_

(b) Date of Last Admission \_\_\_\_\_ 19\_\_

(Other than by Transfer)

15. Diagnosis: (a) Describe Fully

(b) International Statistical Classification No.

(c) Is the Patient ☐ Mentally Defective ☐ Yes ☐ No

☐ Epileptic ☐ Yes ☐ No

16. Number of Previous Admissions

17. Particulars of Last Previous Admission

Hospital \_\_\_\_\_

Date Admitted \_\_\_\_\_ 19\_\_

Date Discharged \_\_\_\_\_ 19\_\_

Hospital

Location

APPENDIX 2-4 (Concluded)

SEPARATION CARD

Mental Institution  
Separation Card

9002-7

☐ Discharge    ☐ Death    ☐ Transfer    ☐ Male    ☐ Female    ☐ Clinic Agency    ☐ General Hospital    ☐ Welfare Institution    ☐ Transfer to other Mental Hospital

Name of Patient \_\_\_\_\_ Date of Separation \_\_\_\_\_ 19\_\_ Case No. \_\_\_\_\_

1. Residence \_\_\_\_\_

2. Age at Separation \_\_\_\_\_ Date of Birth \_\_\_\_\_

3. Date of last Admission other than by Transfer \_\_\_\_\_

4. Date of finally leaving Hospital \_\_\_\_\_

5. Final Diagnosis: (a) Describe fully \_\_\_\_\_

(b) International Statistical Classification No. \_\_\_\_\_

(c) Was the Patient { Mentally Defective ☐ Yes ☐ No ☐ Epileptic ☐ Yes ☐ No ☐

6. Nature of Separation { On Medical ☐ Advice ☐ Against Medical ☐ Advice ☐ Recovered ☐ Much Improved ☐ Improved ☐ Unimproved ☐

7. Condition on Separation { Recovered ☐ Much Improved ☐ Improved ☐ Unimproved ☐

8. Disposition to: ☐ Home ☐ General Hospital ☐ Other ☐ Clinic Agency ☐ Welfare Institution ☐ Transfer to other Mental Hospital

Name of Hospital \_\_\_\_\_

9. Cause of Death { Disease or Condition Directly leading to Death { (a) Due to (or as consequence of) \_\_\_\_\_ (b) Due to (or as consequence of) \_\_\_\_\_ (c) \_\_\_\_\_ Antecedent Causes { Other Significant Conditions \_\_\_\_\_

Approximate interval between onset and death \_\_\_\_\_

10. Was an Autopsy Performed ☐ Yes ☐ No ☐

Findings \_\_\_\_\_

Hospital \_\_\_\_\_ Location \_\_\_\_\_

## APPENDIX 3-1

### CALCULATION OF POPULATION-BASED RATIOS FOR 1960

The ratios of patients to population described in this study were either those quoted in the original source, or were calculated by the author on the basis of the D.B.S. population estimates.

For 1960, the population ratios calculated in *Mental Health Statistics* and its *Financial Supplement* and *Supplement on Patients in Institutions* were based on the original estimates of population made by Dominion Bureau of Statistics. Subsequently, the estimate of the 1960 population was revised on the basis of the 1961 Census. This revised estimate is slightly higher than the original estimate. Where ratios for 1960 data were published, these ratios have been used. In cases where ratios were calculated by the author, the denominators used have been from the Revised Estimate of 1960 population. Thus, two slightly different population-based ratios may be found for the same statistics in various tables.

POPULATION ESTIMATES, CANADA, 1960  
(thousands)

	Original Estimate <sup>1</sup>	Revised on Basis of 1961 Census <sup>2</sup>
CANADA .....	17,814	17,870
Newfoundland .....	459	448
Prince Edward Island .....	103	103
Nova Scotia .....	723	727
New Brunswick .....	600	589
Quebec .....	5,106	5,142
Ontario .....	6,089	6,111
Manitoba .....	899	906
Saskatchewan .....	910	915
Alberta .....	1,283	1,291
British Columbia .....	1,606	1,602

<sup>1</sup> Dominion Bureau of Statistics, *Mental Health Statistics, 1960, op. cit., p. 40.*

<sup>2</sup> Dominion Bureau of Statistics, *Revised estimates of population for Canada and Provinces, 1957-60, Ottawa: Queen's Printer, June 1962.*

## APPENDIX 3-2A

EXPENDITURE ON PROVINCIALLY OPERATED PSYCHIATRIC INSTITUTIONS, PER CAPITA, AND IN RELATION TO PERSONAL INCOME, CANADA AND PROVINCES, 1960

	Operating Exp.		Personal Income	Operating Exp.
	Total (\$'000)	per Capita \$	per Capita \$	as per Cent of Personal Income
CANADA	116,585	6.52	1,540	0.4
Newfoundland .....	2,765	6.17	856	0.7
Prince Edward Island.....	571	5.54	971	0.6
Nova Scotia .....	4,011	5.52	1,177	0.5
New Brunswick.....	3,186	5.41	1,035	0.5
Quebec.....	19,376	3.77	1,309	0.3
Ontario.....	46,619	7.63	1,820	0.4
Manitoba .....	5,530	6.10	1,526	0.4
Saskatchewan .....	9,507	10.39	1,448	0.7
Alberta .....	10,029	7.77	1,573	0.5
British Columbia .....	14,991	9.36	1,806	0.5

Source: Dominion Bureau of Statistics, *Mental Health Statistics, Financial Supplement, 1960*, and Dominion Bureau of Statistics, *National Accounts, Income and Expenditure, 1960*, Ottawa: Queen's Printer, 1961.



APPENDIX 3-2B  
VARIATIONS IN MENTAL HEALTH GRANT EXPENDITURES BY TYPE OF PROGRAMME,  
CANADA AND PROVINCES, 1948 - 1953

Province	Mental Institutions <sup>1</sup>	Psychiatric Units in General Hospitals <sup>2</sup>	Out-patient and Community Clinics <sup>3</sup>	Other Mental Health Services <sup>4</sup>	Research	Training	Total
	%	%	%	%	%	%	%
Newfoundland <sup>5</sup> .....	79.6	—	—	3.6	2.5	14.3	100.0
Prince Edward Island .....	57.4	—	21.3	4.0	—	17.3	100.0
Nova Scotia .....	32.7	7.7	8.6	8.6	9.9	32.5	100.0
New Brunswick .....	35.5	—	23.5	7.9	1.9	31.2	100.0
Quebec .....	36.8	18.3	15.1	2.0	6.3	21.5	100.0
Ontario .....	47.0	4.5	7.1	1.7	13.4	26.3	100.0
Manitoba .....	75.8	1.9	12.3	0.5	2.3	7.2	100.0
Saskatchewan .....	52.7	17.5	12.4	11.5	1.2	4.7	100.0
Alberta .....	71.0	1.1	19.8	0.5	—	7.6	100.0
British Columbia .....	67.7	1.9	2.2	8.3	4.6	15.3	100.0
CANADA .....	48.9	9.2	11.2	3.8	6.9	20.0	100.0

<sup>1</sup> Staff and equipment.

<sup>2</sup> Some personnel and equipment of psychiatric units employed part-time in out-patient clinics.

<sup>3</sup> Some personnel and equipment of out-patient clinics employed part-time in in-patient treatment.

<sup>4</sup> Primarily for employment of personnel in provincial mental health divisions and for mental health education.

<sup>5</sup> Grants to Newfoundland commenced 1949 - 50.

Source: Department of National Health and Welfare, Research and Statistics Division,  
*Mental Health Services in Canada*, General Series Memorandum No. 6, op. cit., p. 184.

APPENDIX 3-2C  
PROVINCIAL VARIATIONS IN TYPE OF PSYCHIATRIC ACCOMMODATION ADDED,<sup>1</sup> 1948-1954

Province	Mental Hospitals Number of beds	Institutions for Mentally Retarded Number of beds	General and Other Hospitals <sup>2</sup> Number of beds	Total Construction Number of beds
Newfoundland.....	308	-	-	308
Prince Edward Island .....	40	-	-	40
Nova Scotia .....	552	64	-	616
New Brunswick .....	725	-	11	736
Quebec .....	1,005	1,639	149	2,793
Ontario .....	627	2,805	210	3,642
Manitoba .....	350	282	-	632
Saskatchewan .....	-	1,116	65	1,181
Alberta .....	283	301	38	622
British Columbia .....	681	300	-	981
CANADA .....	4,571 <sup>3</sup>	6,507	473	11,551

<sup>1</sup> Includes only accommodation built (or under construction) by provincial governments which was financed, in part, by the Federal Hospital Construction Grant, April 1948 - June 1954.

<sup>2</sup> Other Hospitals refers to psychiatric hospitals.

<sup>3</sup> Erratum corrects total to 4,779.

Source: Department of National Health and Welfare, Research and Statistics Division, *Mental Health Services in Canada*, General Series Memorandum No. 6, *op. cit.*, p. 47.

## APPENDIX 3-3

MENTAL HOSPITALS AND INSTITUTIONS FOR MENTALLY RETARDED,  
OPERATED BY THE PROVINCES AT DECEMBER 31, 1960,  
YEAR ESTABLISHED, AND BED CAPACITY IN 1932, 1948 AND 1960

Province	Location	Name	Year Establ.	Bed Capacity		
				1932	1948	1960
Newfoundland	St. John's	Hospital for Mental and Nervous Diseases.	1855	N.A.	263	835
Prince Edward Island	Charlottetown	Riverside Hospital and Hillsborough General Hospital ...	1880	300	200	377
Nova Scotia	Dartmouth	Nova Scotia Hospital ..	1856	450	450	650
	Truro	Nova Scotia Training School.....	1929	130	148	168
New Brunswick	Campbellton	Provincial Hospital...	1954	...	...	600
	Lancaster	Provincial Hospital...	1848	900	912	1,350
Quebec <sup>1</sup>	Montreal	Hôpital de Bordeaux...	...	...	...	700
Ontario	Aurora	The Ontario Hospital School.....	1950	...	...	250
	Cobourg	The Ontario Hospital School.....	1901	420	320	320
	Orillia	The Ontario Hospital School.....	1876	1,566	1,800	2,400
	Smiths Falls	Ontario Hospital School.....	1951	...	...	2,038
	Brockville	The Ontario Hospital ..	1894	813	750	1,544
	Hamilton	The Ontario Hospital ..	1876	1,295	1,065	1,465
	Kingston	The Ontario Hospital ..	1854	1,126	945	1,445
	London	The Ontario Hospital ..	1870	1,200	1,100	1,100
	New Toronto	The Ontario Hospital ..	1890	N.A.	1,100	1,100
	North Bay	The Ontario Hospital ..	1957	...	...	764
	Penetanguishene	The Ontario Hospital ..	1904	390	450	600
	Port Arthur	The Ontario Hospital ..	1936	...	125	764
	St. Thomas	The Ontario Hospital ..	1945	...	1,822	1,822
	Thistleton	The Ontario Hospital ..	1958	...	...	75
Ontario	Toronto	The Ontario Hospital ..	1846	961	750	850
	Whitby	The Ontario Hospital ..	1920	1,586	1,500	1,574
	Woodstock	The Ontario Hospital ..	1906	541	950	1,518
Manitoba	Brandon	Hospital for Mental Diseases .....	1891	1,170	1,300	1,350
	Selkirk	Hospital for Mental Diseases .....	1885	646	700	1,005
	Portage la Prairie	Manitoba School for Mentally Defective Persons .....	1890	401	392	1,014

## APPENDIX 3-3 (Concluded)

Province	Location	Name	Year Establ.	Bed Capacity		
				1932	1948	1960
Saskatchewan	North Battleford	Saskatchewan Hospital	1914	950	1,050	1,120
	Weyburn	Saskatchewan Hospital	1921	1,500	1,100	950
	Moose Jaw	Saskatchewan Training School.....	1955	...	...	1,109
Alberta	Edmonton	Provincial Mental Institute.....	1923	425	1,095	1,600
	Ponoka	Provincial Mental Hospital.....	1911	1,250	1,047	1,077
	Claresholm	Provincial Auxiliary Mental Hospital....	1933	...	100	112
	Raymond	Provincial Auxiliary Mental Hospital....	1939	...	116	134
	Red Deer	Deerhome <sup>2</sup>	1958	...	...	1,050
	Red Deer	Provincial Training School.....	1918	180	300	792
	Colquitz	Provincial Mental Hospital.....	1919	225+	290	222
	Essondale	Provincial Mental Hospital.....	1913	1,700- 2,250	2,287	2,662
British Columbia	New Westminster	Woodlands School .....	1872	325	446	1,473
	Tranquille	Tranquille School .....	...	...	...	150

<sup>1</sup> Remaining mental hospitals operated under religious or lay auspices.

<sup>2</sup> Hospital for mentally retarded.

Source: Canadian Hospital Association,  
*Canadian Hospital Directory*,  
Toronto: The Association, 1961.

Department of National Health and Welfare, *Mental Health Services in Canada*, op. cit.,  
pp. 52,54,57.

Dominion Bureau of Statistics, *First Annual Report of Mental Institutions 1932*, op. cit.,  
*Mental Health Statistics, 1960*, op. cit.



**APPENDIX 3-4**  
**CANADIAN FACILITIES AND REQUIREMENTS IN RELATION TO STANDARDS FOR MENTAL INSTITUTIONS, 1943**

	Estimated Population 000's	Hospitals for Mentally Ill and Epileptic			Schools for the Mentally Defective			Total New Beds Required
		Beds Required Standard 425 per 100,000	Normal Bed Capacity	New Beds Required	Beds Required Standard 125 per 100,000	Normal Bed Capacity	New Beds Required	
CANADA	11,795	50,129	38,919	11,210	14,744	3,535	11,209	22,419
Prince Edward Island ...	91	387	275	112	114	—	114	226
Nova Scotia .....	607	2,580	2,406	174	759	150	609	783
New Brunswick .....	463	1,968	1,250	718	579	—	579	1,297
Quebec .....	3,457	14,692	12,922	1,770	4,321	450	3,871	5,641
Ontario .....	3,917	16,647	12,062 <sup>1</sup>	4,585	4,896	2,177	2,719	7,304 <sup>1</sup>
Manitoba .....	726	3,086	2,028	1,058	907	476	431	1,489
Saskatchewan .....	842	3,578	2,970	608	1,053	—	1,053	1,661
Alberta .....	792	3,366	2,548	818	990	282	708	1,526
British Columbia .....	900	3,825	2,458	1,367	1,125	—	1,125	2,492

<sup>1</sup> This is exclusive of accommodation at the Ontario Hospital, St. Thomas, which was leased to the Dominion Government from 1939 to 1945 for use as an R.C.A.F. training centre. This institution, which had 1,000 patients at July 31, 1939, will again be used as a mental hospital at an early date.

Source: Dominion Provincial Conference on Reconstruction, *Health, Welfare and Labour Reference Book*, op. cit., p. 24.



## APPENDIX 4-1

### DIAGNOSTIC CLASSIFICATION USED BY DOMINION BUREAU OF STATISTICS

International variation in the classification of mental disorders has been described by Stengel.<sup>1</sup> Within Canada, national and provincial statistics are based on the International Classification of Diseases, while many psychiatrists in general hospitals utilize the Standard Nomenclature.

The diagnostic classification used in the 1949 and previous annual reports of mental institutions by D.B.S. was an adaptation of that employed by the American Psychiatric Association. For 1950 and subsequent years, an adaptation of the International Statistical Classification of Diseases has been used.<sup>2</sup>

The following table shows the relation between the statistical classification used since 1957 by Dominion Bureau of Statistics, the 1955 revision of the International Classification of Diseases, and various groupings used throughout this study. These latter groupings are similar to those described by a WHO Sub-Committee,<sup>3</sup> wherein review of five draft classifications, namely from the United States, England and Wales, Norway, France, and Denmark, revealed substantial agreement in five common areas:

- Mental disorders associated with organic factors;
- Psychoses for which no etiology is demonstrable;
- Neuroses;
- Mental deficiency;<sup>4</sup>
- Personality disorders.

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<sup>1</sup>Bulletin World Health Organization 21:601-663, 1959.

<sup>2</sup>Dominion Bureau of Statistics, *Mental Institutions, 1950, op. cit.*

<sup>3</sup>World Health Organization, Expert Committee on Health Statistics, Sub-Committee on Classification of Diseases, First Report, Geneva: Nov. 13-21, 1961, WHO/HS/ICD/2, April 27, 1962.

<sup>4</sup>Mental retardation is the term used in an annex to the Ninth Report of the Expert Committee on Health Statistics of the World Health Organization.

International Classification of Diseases—Code Numbers	Dominion Bureau of Statistics Classification	Groupings Used in this Study
	<i>Psychoses</i>	
300	Schizophrenia	Functional psychoses
303	Paranoia and paranoid states	
301	Manic-depressive reaction	
302	Involutional melancholia	
304,306	Senile and cerebral arteriosclerosis	Non-functional psychoses
020.1, 024.1, 025, 026.1	Syphilis of central nervous system with psychosis	
305	Presenile psychosis	
307	Alcoholic psychosis	
083.2, 308, 309, 648.3, 688.1	Other and unspecified psychoses	
	<i>Psychoneuroses</i>	
310	Anxiety reaction	Psycho-neuroses
311	Hysterical reaction	
313	Obsessive-compulsive reaction	
314	Neurotic-depressive reaction	
315-317	Somatization reaction	
312,318	Other and unspecified psychoneuroses	
	<i>Disorders of Character, Behaviour and Intelligence</i>	
325	Mental deficiency	Mental retardation
320	Pathological personality	
322	Alcoholism	
323	Other drug addiction	
324	Primary childhood behaviour disorders	Remaining diagnoses
083.1, 321, 326	Other and unspecified disorders of character, behaviour and intelligence	
	<i>Other Conditions and Mental Observation WITHOUT Need for Further Medical Care</i>	
024.0, 026.0	Syphilis	
353	Epilepsy	
793.0	Not elsewhere classified; mental observation without need for further medical care	



## APPENDIX 4-2

## PATIENT LOAD OF PUBLIC PSYCHIATRIC UNITS, ONTARIO, 1956-1960

Year	Bed Capacity	First Ad- missions	Readmis- sions	Dis- charges	Deaths	Total Days Care
1956 .....	257	2,207	737	2,910	9	73,391
1957 .....	257	2,215	807	3,025	14	96,641
1958.....	351	2,823	1,138	3,832	17	102,475
1959.....	351	3,103	1,233	4,297	14	109,990
1960.....	431	3,047	1,391	4,387	19	124,170

Source: Ontario Department of Health, Mental Health Branch, *94th Annual Report for Calendar Year 1960, op. cit.*, p. 45.



# APPENDIX 5-1 PATIENT MOVEMENT, BY SEX AND AGE GROUP, CANADA, 1932, 1941, 1951, 1956 AND 1960

Age Group	Male					Female				
	1932	1941	1951	1956	1960	1932	1941	1951	1956	1960
All <sup>1</sup> Ages										
First Admissions.....	3,340	3,942	5,911	10,350	13,167	2,434	3,122	4,981	9,452	12,379
Readmissions.....	723	1,031	1,786	5,323	7,982	676	1,002	1,786	4,900	7,703
Discharges.....	1,907	2,935	5,133	12,741	17,800	1,477	2,475	4,806	12,214	17,181
Deaths.....	1,120	1,387	1,746	1,927	2,322	914	1,025	1,234	1,496	1,963
Residents <sup>2</sup> .....	17,021	25,021	29,859	36,890	40,423	14,151	20,114	25,309	32,176	35,020
Increment .....	+ 1,036	+ 651	818	1,005	1,027	719	624	727	+ 642	+ 938
Under 20										
First Admissions.....	600	660	921	1,181	1,689	379	453	542	967	1,405
Readmissions.....	37	59	50	130	218	36	50	38	111	213
Discharges.....	152	277	320	608	1,030	111	247	280	574	888
Deaths.....	74	93	75	86	81	46	57	70	61	92
Residents <sup>2</sup> .....	1,476	—	—	4,655	5,871	1,198	—	—	3,398	4,330
20-59										
First Admissions.....	2,186	2,476	3,480	6,892	8,737	1,621	2,023	3,257	6,462	8,431
Readmissions.....	587	828	1,468	4,238	6,522	548	815	1,411	3,921	6,262
Discharges.....	1,528	2,276	3,949	10,172	14,175	1,184	1,941	3,864	9,741	13,863
Deaths.....	513	581	479	382	436	463	393	330	273	311
Residents <sup>2</sup> .....	12,569	—	—	23,257	24,731	9,991	—	—	18,754	20,540
60 +										
First Admissions.....	528	805	1,490	2,247	2,741	425	646	1,073	2,004	2,543
Readmissions.....	95	144	267	858	1,242	87	137	337	864	1,228
Discharges.....	214	382	860	1,943	2,595	178	287	658	1,890	2,430
Deaths.....	528	713	1,184	1,459	1,805	397	575	832	1,161	1,560
Residents <sup>2</sup> .....	2,879	—	—	8,904	9,773	2,897	—	—	8,973	10,115

<sup>1</sup>Does not equal sums of age groups due to inclusion of patients of unstated age.

<sup>2</sup>1932 data are for patients in hospital on June 1, 1931; 1956 and 1960 data are for patients on books December 31.

Source: Dominion Bureau of Statistics, *Census of Canada, 1931*, Vol. IX, op. cit.; *ibid.*, *Annual Report, Mental Institutions 1932*, op. cit.; *ibid.*, *Tenth Annual Report of Mental Institutions, 1941*, op. cit.; *ibid.*, *Mental Institutions, 1951*, op. cit.; *ibid.*, *Mental Health Statistics, 1956 and 1960*, op. cit.; and *ibid.*, *Mental Health Statistics, Supplement: Patients in Institutions 1955-57 and 1960*, op. cit.

APPENDIX 5-2  
PATIENT MOVEMENT, BY SEX AND DIAGNOSTIC GROUP, CANADA, 1932, 1941, 1951, 1956 AND 1960

	Male						Female				
	1932	1941	1951	1956	1960		1932	1941	1951	1956	1960
Schizo- phrenia	866	1,008	1,386	2,151	2,567	604	740	1,305	2,001	2,399	
and para-	224	395	633	1,253	2,259	206	351	591	1,466	2,573	
noid psy-	538	864	1,478	2,843	4,297	416	610	1,496	3,129	4,600	
choses	197	294	306	294	370	223	227	232	257	307	
	7,970	—	—	15,132	15,821	6,299	—	—	12,510	12,869	
	+355	+245	+235	+267	+159	+171	+254	+168	+81	+65	
Affective psycho- ses	423	469	633	1,006	1,160	468	641	865	1,655	2,010	
	199	262	404	763	978	243	355	641	1,485	1,996	
	419	587	944	1,586	2,019	500	752	1,384	2,973	3,842	
	107	77	117	88	127	131	108	113	104	159	
	1,488	—	—	2,442	2,359	1,785	—	—	3,494	3,525	
	+96	+67	-24	+95	-8	+80	+136	+9	+63	+5	
Mental retarda- tion	498	589	853	821	1,105	324	476	632	596	856	
	29	32	111	102	204	44	30	75	88	155	
	74	84	343	373	550	65	80	247	290	417	
	38	17	218	205	198	27	22	158	150	207	
	3,690	—	—	9,927	11,755	3,227	—	—	8,031	9,291	
	+415	+520	+403	+345	+561	+276	+404	+302	+244	+387	

<sup>1</sup> 1932 data are for patients in hospital on June 1, 1931; 1956 and 1960 data are for patients on books at December 31.

Source: Dominion Bureau of Statistics, *Census of Canada 1931*, Vol. IX, op. cit.; *ibid.*, *Annual Report, Mental Institutions 1932*, op. cit.; *ibid.*, *Tenth Annual Report of Mental Institutions, 1941*, op. cit.; *ibid.*, *Mental Institutions, 1951*, op. cit.; *ibid.*, *Mental Health Statistics, 1956 and 1960*, op. cit.; and *ibid.*, *Mental Health Statistics, Supplement: Patients in Institutions 1955-57 and 1960*, op. cit.



APPENDIX 6-1  
FIRST ADMISSIONS DIAGNOSED AS PSYCHOSES, BY SEX, AGE GROUP, AND TYPE OF PSYCHOSIS,  
RATIO PER 100,000 POPULATION, CANADA, 1932, 1941, 1951, 1956 AND 1960

	Year	All Ages		0-19		20-29		30-39		40-59		60+	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
All Psychoses .....	1932	51	41	7	5	64	50	81	62	76	68	119	102
	1941	51	43	8	6	64	47	67	60	67	66	127	109
	1951	55	50	6	4	68	51	63	73	67	71	168	128
	1956	68	68	7	6	88	74	85	91	89	103	204	187
	1960	70	74	8	7	84	78	101	103	92	113	221	204
Schizophrenia and paranoid psychoses, .	1932	17	13	3	2	36	23	36	27	20	19	6	7
	1941	17	13	4	3	41	22	32	27	17	19	5	6
	1951	20	19	4	3	50	34	38	43	21	26	6	7
	1956	26	25	5	4	69	49	54	57	28	34	9	10
	1960	28	27	7	5	68	49	62	62	31	41	12	11
Affective psychoses .....	1932	8	10	1	1	9	11	14	14	17	25	10	12
	1941	8	11	1	1	9	12	10	18	16	26	9	11
	1951	9	13	-	-	8	10	10	18	19	30	17	19
	1956	12	21	-	-	9	14	11	21	28	53	31	42
	1960	13	23	-	-	8	15	14	28	29	55	36	47

**APPENDIX 6-1 (Concluded)**  
**FIRST ADMISSIONS DIAGNOSED AS PSYCHOSES, BY SEX, AGE GROUP, AND TYPE OF PSYCHOSIS,**  
**RATIO PER 100,000 POPULATION, CANADA, 1932, 1941, 1951, 1956 AND 1960**

	Year	All Ages		0-19		20-29		30-39		40-59		60+	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Psychoses of senium.....	1932	8	7	-	-	-	-	-	-	5	4	82	73
	1941	11	9	-	-	-	-	-	-	5	3	100	82
	1951	15	10	-	-	-	-	-	-	3	2	125	89
	1956	16	14	-	-	-	-	-	-	2	1	141	119
	1960	15	15	-	-	-	-	-	-	2	1	142	132
Syphilis of central nervous system.....	1932	5	1	-	-	-	1	12	4	14	3	5	-
	1941	5	1	-	-	2	-	9	2	12	3	4	-
	1951	2	-	1	-	-	-	1	-	6	2	4	1
	1956	-	-	-	-	-	-	-	-	3	-	2	-
	1960	-	-	-	-	-	-	-	-	1	-	1	-
Alcoholic psychoses.....	1932	2	-	-	-	-	-	3	-	4	-	3	-
	1941	2	-	-	-	-	-	4	1	5	-	2	-
	1951	3	-	-	-	2	-	6	2	8	1	4	-
	1956	6	1	-	-	4	-	12	2	15	3	6	2
	1960	7	2	-	-	3	1	13	3	18	5	11	2
Remaining psychoses.....	1932	10	10	2	2	17	15	16	17	16	16	12	9
	1941	8	8	3	2	11	11	12	12	12	13	7	8
	1951	6	6	1	1	8	7	7	10	10	10	12	12
	1956	7	7	-	-	6	10	7	10	12	10	16	14
	1960	6	8	1	1	5	13	7	11	12	10	17	11

Source: Blishen, E.R., Social Factors Associated with the Emergence and Distribution of the Functional Psychoses, unpublished manuscript; Dominion Bureau of Statistics, *Mental Health Statistics, 1960*, op. cit., pp. 70-71.

APPENDIX 6-2A  
FIRST ADMISSIONS, BY SEX AND AGE GROUP, RATE PER 100,000 POPULATION, CANADA AND PROVINCES, 1950-1952

	0-19 Years			20-29 Years			30-39 Years			40-49 Years			50-59 Years			60-69 Years			70 Years and Over		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Newfoundland .....	8	10	9	95	56	74	105	76	89	98	78	88	87	64	76	113	67	91	129	119	124
Prince Edward Island .....	10	7	8	122	50	74	139	139	139	226	123	177	185	100	137	105	120	110	200	117	156
Nova Scotia .....	23	19	21	117	110	113	107	132	119	123	102	113	107	110	109	97	82	89	73	39	55
New Brunswick .....	16	13	15	113	90	100	102	108	105	120	93	107	120	123	122	116	93	105	203	222	213
Quebec .....	35	23	29	86	54	71	75	66	71	64	62	63	80	67	74	100	67	83	192	145	168
Ontario .....	40	30	35	92	72	82	83	87	85	84	83	84	88	88	88	113	102	108	292	230	258
Manitoba .....	25	19	22	104	106	105	103	123	113	98	104	101	85	85	85	78	79	79	226	146	188
Saskatchewan .....	27	24	25	157	164	160	142	195	169	140	184	161	160	154	157	177	153	167	550	455	518
Alberta .....	23	28	25	86	72	79	97	98	97	96	90	93	93	82	89	106	90	100	280	230	260
British Columbia .....	56	43	50	146	136	141	177	179	178	183	180	181	168	141	156	171	158	166	284	196	244
CANADA .....	34	26	30	100	80	90	97	101	99	96	94	95	101	92	97	119	99	109	262	197	230

Source: Gregory, I., Factors influencing first admission rates to Canadian mental hospitals, *op. cit.*

APPENDIX 6-2B  
FIRST ADMISSIONS, BY SELECTED DIAGNOSES, SEX AND SPECIFIED AGE GROUPS,  
RATE PER 100,000 POPULATION, CANADA AND PROVINCES, 1950-1952

	C.N.S. Syphilis		Schizo- phrenia		Manic Depress.		Invol- utional		Para- noid States		Senile and Cerebral Arterio- sclerosis		Alco- holic Psycho- ses		Psycho- neuro- ses		Without Psychoses					
	20 Years and Over	F	20 Years and Over	M	F	M	20 Years and Over	M	F	20 Years and Over	M	F	20 Years and Over	M	F	20 Years and Over	M	20 Years and Over	F	20 Years and Over	M	F
Newfoundland .....	3	2	30	23	19	11	4	11	1	—	94	67	3	—	2	6	—	4	17	1	2	3
Prince Edward Island .....	1	—	22	25	8	17	13	15	2	1	61	56	8	4	17	12	—	—	49	6	9	7
Nova Scotia .....	3	2	35	37	18	25	11	14	—	—	48	30	22	4	1	7	—	—	2	—	12	7
New Brunswick .....	4	3	27	31	3	6	7	5	—	—	93	107	4	—	8	17	3	2	23	3	11	9
Quebec .....	4	1	19	11	17	16	2	3	5	6	90	70	5	—	5	5	2	1	1	—	35	25
Ontario .....	3	1	29	26	8	13	4	7	2	2	131	110	5	1	7	10	4	1	5	1	38	29
Manitoba .....	2	—	31	37	14	18	2	2	6	7	85	60	5	1	6	13	1	1	8	2	23	20
Saskatchewan .....	1	1	41	47	7	14	9	12	2	2	226	202	3	—	24	51	11	6	12	1	26	22
Alberta .....	1	—	28	34	7	8	2	6	5	4	124	106	6	1	6	8	4	1	6	1	24	33
British Columbia .....	3	1	53	57	6	11	3	6	3	3	147	109	8	2	22	36	8	4	24	4	49	43
CANADA .....	3	1	29	27	11	14	4	6	3	3	121	97	6	1	8	13	4	2	7	1	31	25

Source: Gregory, I., Factors influencing first admission rates to Canadian mental hospitals, *op. cit.*



## APPENDIX 7-1

DEATHS, BY DISTRIBUTION OF STAY AND DIAGNOSTIC GROUP, CANADA,  
1956-1960

	Year	All	Under 1 Yr.	1-2 Yrs.	2-3 Yrs.	3-5 Yrs.	5-10 Yrs.	10 Yrs. and Over
All Diagnoses .....	1956	3,423	1,404	328	229	299	336	827
	1957	3,989	1,597	398	266	339	444	945
	1958	3,775	1,546	358	264	314	385	908
	1959	4,153	1,725	403	253	336	454	982
	1960	4,285	1,841	406	251	355	392	1,040
All Psychoses .....	1956	2,892	1,237	294	201	245	269	646
	1957	3,358	1,411	342	225	288	355	737
	1958	3,212	1,364	322	220	273	310	723
	1959	3,367	1,464	333	215	269	323	763
	1960	3,503	1,541	340	206	298	301	817
Schizophrenia and paranoid psychoses .....	1956	551	42	19	12	26	73	379
	1957	598	47	25	18	20	74	414
	1958	603	55	20	16	26	61	425
	1959	626	65	25	23	24	65	424
	1960	677	74	20	13	25	59	486
Mental retardation .....	1956	355	74	19	19	38	53	152
	1957	402	61	38	28	36	66	173
	1958	333	59	13	29	24	47	161
	1959	414	74	33	15	35	77	180
	1960	405	93	22	15	28	60	187

Source: Dominion Bureau of Statistics, *Mental Health Statistics, 1955, op. cit.*,*ibid.*, 1956,*ibid.*, 1957,*ibid.*, 1958,*ibid.*, 1959,*ibid.*, 1960.

**APPENDIX 7-2**  
**DISCHARGES, BY DISTRIBUTION OF STAY AND DIAGNOSTIC GROUP,**  
**CANADA, 1956-1960**

	Year	All	Under 1 Yr.	1-2 Yrs.	2-3 Yrs.	3-5 Yrs.	5-10 Yrs.	10 Yrs. and Over
All Diagnoses .....	1956	24,955	22,767	892	361	323	330	282
	1957	26,707	24,503	950	334	349	316	255
	1958	30,241	27,361	1,023	419	441	497	500
	1959	33,186	30,710	1,057	332	354	406	327
	1960	34,981	32,254	1,152	385	350	455	385
All Psychoses .....	1956	13,185	11,544	673	274	233	238	223
	1957	14,274	12,575	726	254	264	261	194
	1958	16,349	14,408	735	301	280	332	293
	1959	17,412	15,552	817	261	243	296	243
	1960	18,434	16,522	760	316	260	298	278
Schizophrenia and paranoid psychoses .....	1956	5,972	4,872	426	188	158	165	163
	1957	6,576	5,365	494	186	181	202	148
	1958	7,532	6,231	477	190	189	239	206
	1959	8,223	6,847	591	188	169	236	192
	1960	8,896	7,508	547	212	183	227	219
Mental Retardation .....	1956	663	364	83	44	55	69	48
	1957	625	352	75	51	54	40	53
	1958	1,068	429	126	75	124	132	182
	1959	796	466	70	41	75	82	62
	1960	967	609	68	34	64	117	75

Source: Dominion Bureau of Statistics, *Mental Health Statistics, 1955, op. cit.*,  
*ibid.*, 1956,  
*ibid.*, 1957,  
*ibid.*, 1958,  
*ibid.*, 1959,  
*ibid.*, 1960,

## APPENDIX 8-1 A

# CENSUS OF PATIENTS ON BOOKS OF CANADIAN PSYCHIATRIC INSTITUTIONS, 1955-1960

### Derivation of Census

Dominion Bureau of Statistics has published a series of tabulations for an annual census of patients on books of card-reporting psychiatric institutions, at the end of 1955 and subsequent years. This census includes data on age, sex, diagnosis, year of admission, type of institution and province. Its development was described in this manner:

"The Dominion Bureau of Statistics...began in 1952 the processing of statistics in order to arrive at a census of patients in mental institutions... This census was to contain information on the in-patient population in mental institutions, and constitute a supplement to current reports on patients who enter and leave institutions each year. Existing information at that time were the data from a census of patients in mental institutions, June 1, 1931, which contained identification number, name, age, diagnosis, sex, and date of admission, as well as admission and separation cards for individual patients, which hospitals had been submitting since January 1, 1932. All hospitals were requested to submit a list of their patients, giving sex, age, and date of admission. By adding admission cards for the remainder of the year 1952 and for 1953, and by eliminating the cards for patients separated during that period, a census as at December 31, 1953, was to be obtained. It was then decided to include diagnosis, method, and type of admission in the census information.

"Accordingly, admission cards for patients who had been admitted since 1932 and were still on books in 1953 were drawn from the files. For patients admitted prior to June 1, 1931, and still on books, cards were made out, based on the lists which the hospitals had supplied in 1931 and 1952 and supplementary information, which most hospitals obligingly supplied. For patients who had been admitted between June 1, 1931, and January 1, 1932, cards were made out based on the 1952 listings. These cards constituted a census of patients in all card reporting institutions, dated April 1, 1952.

"To these cards, admission cards from May 1952 to December 1953 were added, and cards of patients separated during this period withdrawn, so that the resulting deck represented a census as at December 31, 1953. The task of searching for the documents had been very time-consuming and by 1956, due to staff shortage, it was completed for only eight provinces (excluding Quebec and Ontario). At this time more staff became available, so that the Bureau was enabled to produce a complete census of a fairly recent date. By 1959 the Bureau had a deck of machine-punched cards, representing patients on books of mental institutions at December 31, 1955. In the meantime the coding of documents and mechanical data processing procedures had been modified, so that it is now possible to produce an annual census by adding cards for patients admitted during the year and eliminating the cards for those who separated. Most of these operations are now done by machines, so that the censuses for the year 1955, 1956, and 1957 were completed within a few months."<sup>1</sup>

The census encompasses all patients on the books. In addition to in-patients, it includes patients on probation, in approved homes, on temporary home visits, on escape, or temporarily absent for other reasons. Excluded are patients in

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<sup>1</sup>Dominion Bureau of Statistics, *Mental Health Statistics, Supplement: Patients in Institutions 1955-57*, op. cit.

institutions which do not report the movement of their patients on morbidity cards (although these institutions may report patient movement on summary schedules). Also excluded are part-time patients, i.e., those who spend the day in hospital and leave at night, and those who hold an outside job and return to the hospital in the evening (day patients and night patients).

Although much other useful information is available on the morbidity reports (and punch card summaries) of admissions, it has not been transferred to the punch cards for the census.

### Discrepancies in Census

The census is based upon reports of individual patients submitted by 99 (in 1960) separate institutions.

"Through careful periodical comparing of the count of morbidity cards with the hospital records, it has been possible to eliminate all discrepancies but for four provinces, where errors are well below one per cent of the total."<sup>2</sup>

In addition there is some fluctuation in the number of reporting facilities, in terms of closure, or re-definition of function, or additions. By the end of 1960, it was felt that the census was about 98 per cent complete, and that the errors or discrepancies cumulated from the past had been confined to some three institutions in one province. These discrepancies were estimated as 663 more cards on file than were reported on schedules.

If there were no discrepancies the various components of card-reported patient movement between the end of 1955 and 1960 would have produced 74,744 patients on books at the end of 1960:

Patients reported on books: Dec. 31, 1955.....	67,525
Add: First and readmissions, 1956-60.....	176,914
Subtract: Discharges and deaths, 1956-60.....	169,695
Calculated number remaining Dec. 31, 1960.....	74,744

The actual number of patients reported on the books Dec. 31, 1960, was 75,443,699 higher than the number calculated above, a difference of less than one per cent nationally. To some extent this is accounted for by changes in the number of reporting institutions, as well as by errors involved in the reporting of admission, transfers, and separations by individual institutions.

These discrepancies are negligible for Newfoundland, New Brunswick, Quebec, Ontario, Manitoba, Saskatchewan and British Columbia. These discrepancies are relatively higher in Prince Edward Island, Nova Scotia and Alberta, where there have been changes in the number of institutions submitting card reports during the period.

<sup>2</sup> *Ibid.*, 1959, p. 7.



**APPENDIX 8-1 B**  
**PATIENT MOVEMENT (CARD-REPORTED),**  
**CANADA AND PROVINCES, 1956-1960**

Province	Patients on Books Dec. 31, 1955	Patient Movement 1956-1960			Patients on Books Dec. 31, 1960		
		Admis- sions	Deaths	Dis- charges	Calcul- ated <sup>1</sup>	Reported	Calculated minus Reported
CANADA..	67,525	176,914	19,625	150,070	74,744	75,443	- 699
Nfld. ....	921	2,450	221	2,232	918	928	- 10
P.E.I. ....	573	1,490	134	1,267	662	472	+ 190
N.S. ....	744	7,074	173	6,827	818	1,241	- 423
N.B. ....	2,200	5,985	697	5,154	2,334	2,232	+ 102
Quebec ...	19,350	36,523	4,475	28,984	22,414	22,748	- 334
Ontario ...	24,035	65,102	8,080	53,802	27,255	27,169	+ 86
Man. ....	3,919	9,829	908	8,602	4,238	4,241	- 3
Sask. ....	4,930	11,917	1,661	10,319	4,867	4,807	+ 60
Alta. ....	4,161	11,633	922	10,534	4,338	4,666	- 328
B.C. ....	6,692	24,911	2,354	22,349	6,900	6,939	- 39

<sup>1</sup> Calculated = (Patients on books, Dec. 31, 1955) + (Admissions) - (Deaths) - (Discharges).

Source: Dominion Bureau of Statistics, *Mental Health Statistics, 1956-1960, op. cit., Mental Health Statistics, Supplement: Patients in Institutions, 1955-57, and 1960, op. cit.*

**APPENDIX 8-2**  
**PATIENTS ON BOOKS, BY SEX AND AGE GROUP, AT DECEMBER 31, NUMBER OF PATIENTS**  
**AND RATIO PER 100,000 POPULATION, CANADA, 1955-1960**

Year	Age Group (years)											Unstated
	Total	0—9	10—19	20—29	30—39	40—49	50—59	60—69	70—79	80—89	90 and Over	
Number of patients												
1955.....	36,006	1,209	3,175	4,575	5,828	6,466	Male 6,080	4,807	2,849	862	91	64
1956.....	36,890	1,222	3,433	4,627	5,966	6,449	6,215	4,887	2,981	932	104	74
1957.....	37,624	1,177	3,675	4,673	6,095	6,575	6,317	4,948	3,011	983	98	72
1958.....	38,125	1,208	3,789	4,667	6,187	6,592	6,409	4,941	3,137	1,021	105	69
1959.....	39,174	1,372	4,150	4,751	6,304	6,626	6,434	5,003	3,270	1,087	123	54
1960.....	40,423	1,464	4,407	4,891	6,449	6,837	6,554	5,149	3,326	1,160	138	48
Rate per 100,000 population												
1955.....	447	64	245	393	484	670	872	958	957	1,133	1,468	
1956.....	446	62	253	390	509	652	873	974	980	1,190	1,664	
1957.....	440	58	257	384	506	647	862	981	968	1,214	1,538	
1958.....	436	58	254	380	505	636	851	974	992	1,221	1,598	
1959.....	438	65	273	385	508	627	828	973	1,018	1,258	1,864	
1960.....	442	68	277	387	511	642	826	984	1,024	1,286	1,917	
Number of patients												
1955.....	31,519	857	2,379	3,308	5,139	5,861	Female 5,267	4,471	2,863	1,187	141	46
1956.....	32,176	916	2,482	3,309	5,154	5,935	5,356	4,524	2,972	1,323	154	51
1957.....	32,687	904	2,642	3,385	5,117	5,840	5,502	4,602	3,127	1,339	173	56
1958.....	33,127	990	2,792	3,502	5,054	5,824	5,486	4,630	3,258	1,366	164	61
1959.....	33,873	1,069	2,936	3,516	5,136	5,822	5,687	4,628	3,391	1,453	190	45
1960.....	35,020	1,124	3,206	3,648	5,222	5,923	5,747	4,765	3,571	1,562	217	35
Rate per 100,000 population												
1955.....	402	47	189	287	443	603	805	926	975	1,369	1,457	
1956.....	400	49	189	285	436	631	803	926	982	1,481	1,559	
1957.....	393	46	192	287	423	600	800	924	997	1,445	1,723	
1958.....	389	49	195	296	412	582	774	912	1,007	1,422	1,633	
1959.....	389	53	201	296	415	565	776	891	1,017	1,457	1,939	
1960.....	394	54	211	302	420	566	758	911	1,042	1,442	1,764	

Source: Dominion Bureau of Statistics, *Mental Health Statistics, Supplement: Patients in Institutions, 1955-57*, op. cit., p. 23; 1958, p. 17; 1959, p. 20; 1960, p. 18.

APPENDIX 8-3  
PATIENTS ON BOOKS AT DECEMBER 31, BY SEX, DIAGNOSTIC AND AGE GROUPS,  
RATIO PER 100,000 POPULATION, CANADA, 1955-1960

Year	Age Group (years)										
	Total	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90 and over
Male											
All Psychoses											
1955.....	296	-	16	186	328	511	711	823	864	1,065	1,371
1956.....	294	-	19	182	344	497	713	833	882	1,125	1,568
1957.....	287	-	20	173	337	487	699	838	872	1,124	1,366
1958.....	280	1	18	166	329	472	688	821	886	1,117	1,416
1959.....	274	1	21	165	321	458	660	814	895	1,128	1,576
1960.....	271	1	21	157	320	462	650	814	902	1,145	1,583
Schizophrenia and paranoid psychoses											
1955.....	184	-	12	148	257	361	437	433	321	219	242
1956.....	183	-	14	147	270	353	439	436	325	221	240
1957.....	179	-	16	141	267	348	430	439	327	231	220
1958.....	176	1	13	136	263	344	428	437	344	216	183
1959.....	173	1	15	138	255	335	412	434	347	222	212
1960.....	173	1	17	133	257	342	412	441	359	231	208
Affective psychoses											
1955.....	30	-	1	11	18	45	83	118	111	75	-
1956.....	30	-	1	10	21	43	83	123	113	97	-
1957.....	29	-	1	8	21	43	84	121	116	98	-
1958.....	27	-	1	7	18	40	79	114	116	93	-
1959.....	27	-	2	7	19	39	76	120	112	80	60
1960.....	26	-	1	6	19	37	73	116	112	87	56
Mental retardation											
1955.....	119	60	213	171	115	107	98	82	50	29	-
1956.....	120	58	217	171	123	106	99	85	52	28	-
1957.....	120	52	216	173	125	108	100	88	52	36	-
1958.....	121	51	215	176	129	109	98	91	54	35	-
1959.....	125	58	227	182	131	110	99	91	56	29	76
1960.....	129	61	229	188	134	114	101	94	52	32	97

## APPENDIX 8-3 (Concluded)

Year	Age Group (years)										
	Total	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90 and Over
Female											
<i>All Psychoses</i>											
1955..	272	—	15	121	288	449	657	792	888	1,288	1,405
1956..	267	—	15	117	281	460	648	785	893	1,395	1,488
1957..	261	—	15	114	271	441	638	782	903	1,349	1,643
1958..	253	—	15	114	256	417	611	766	907	1,323	1,534
1959..	249	1	17	109	252	403	608	745	905	1,330	1,827
1960..	249	1	18	109	248	398	591	757	924	1,299	1,650
<i>Schizophrenia and paranoid psychoses</i>											
1955..	159	—	8	90	215	306	393	431	327	232	114
1956..	156	—	10	88	212	313	389	424	327	250	111
1957..	151	—	10	83	202	304	384	424	336	250	110
1958..	147	—	10	86	193	283	375	415	340	255	—
1959..	145	—	12	82	192	276	371	405	347	253	132
1960..	145	—	13	82	189	279	360	412	358	239	162
<i>Affective psychoses</i>											
1955..	44	—	1	11	32	64	138	179	149	98	—
1956..	44	—	1	10	29	71	132	182	148	124	—
1957..	43	—	1	11	31	65	128	181	153	119	—
1958..	42	—	1	11	27	66	118	181	159	112	—
1959..	41	—	2	10	30	59	123	170	162	114	61
1960..	40	—	1	10	28	50	114	170	161	106	73
<i>Mental retardation</i>											
1955..	99	44	156	131	109	107	94	82	53	33	—
1956..	100	45	155	134	107	115	96	82	50	34	—
1957..	99	42	156	138	106	109	102	82	48	33	—
1958..	101	44	157	145	107	111	102	83	48	33	—
1959..	102	47	160	148	109	108	102	82	51	32	51
1960..	105	48	163	148	116	110	102	83	53	31	33

Source: Dominion Bureau of Statistics, *Mental Health Statistics, Supplement: Patients in Institutions, 1955-57, op. cit., 1958, 1959, 1960.*



APPENDIX 8-4

PATIENTS ON BOOKS OF PSYCHIATRIC INSTITUTIONS, NUMBER AND RATIO  
PER 100,000 POPULATION, BY SEX, AGE, AND DIAGNOSTIC GROUP,  
CANADA, DECEMBER 31, 1956 AND 1961

Male	1956				1961			
	All Ages	Under 20	20-59	60 and Over	All Ages	Under 20	20-59	60 and Over
<i>Number:</i>								
ALL DIAGNOSES .....	36,890	4,655	23,257	8,904	40,865	6,229	24,925	9,666
<i>Psychoses</i> .....	24,341	268	16,211	7,838	24,535	373	15,866	8,265
Schizophrenia and paranoid psychoses ..	15,132	184	11,575	3,388	15,749	299	11,749	3,679
Affective psychoses ...	2,442	14	1,382	1,044	2,287	13	1,259	1,015
Psychoses of senium ...	2,123	—	76	2,047	2,180	—	62	2,116
Other psychoses .....	4,644	52	3,205	1,391	4,319	61	2,796	1,455
<i>Psychoneuroses</i> .....	495	10	349	136	761	28	569	163
<i>Mental retardation</i> .....	9,927	4,080	5,241	606	12,354	5,260	6,382	701
<i>Remaining diagnoses</i> .....	2,137	352	1,416	346	3,215	568	2,108	537
<i>Ratio per 100,000 Population:</i>								
ALL DIAGNOSES .....	452	143	579	1,003	443	160	572	1,000
<i>Psychoses</i> .....	299	8	404	883	266	10	364	855
Schizophrenia and .....								
paranoid psychoses ..	186	6	288	382	171	8	270	381
Affective psychoses ...	30	—	34	118	25	—	29	105
Psychoses of senium ...	26	—	2	231	24	—	1	219
Other psychoses .....	57	2	80	157	47	2	64	151
<i>Psychoneuroses</i> .....	6	0.3	9	15	8	—	13	17
<i>Mental retardation</i> .....	122	126	131	68	134	135	146	73
<i>Remaining diagnoses</i> .....	26	11	35	39	35	15	48	56

## APPENDIX 8-4 (Concluded)

PATIENTS ON BOOKS OF PSYCHIATRIC INSTITUTIONS, NUMBER AND RATIO  
PER 100,000 POPULATION, BY SEX, AGE, AND DIAGNOSTIC GROUP,  
CANADA, DECEMBER 31, 1956 AND 1961

Female	1956				1961			
	All Ages	Under 20	20-59	60 and Over	All Ages	Under 20	20-59	60 and Over
<i>Number:</i>								
ALL DIAGNOSES .....	32,176	3,398	19,754	8,973	35,621	4,696	20,726	10,164
<i>Psychoses</i>	21,506	194	13,355	7,957	21,848	296	12,827	8,699
Schizophrenia and paranoid psychoses..	12,510	137	9,078	3,295	12,736	173	8,828	3,652
Affective psychoses...	3,494	2	2,026	1,454	3,452	19	1,915	1,512
Psychoses of senium	2,488	—	57	2,431	2,635	—	45	2,589
Other psychoses .....	3,014	56	2,194	758	3,025	65	2,039	919
<i>Psychoneuroses</i> .....	1,036	22	797	219	1,438	62	1,068	307
<i>Mental retardation</i> .....	8,031	2,883	4,554	586	9,971	3,835	5,447	681
<i>Remaining diagnoses</i>	1,603	339	1,036	245	2,364	503	1,384	477
<i>Ratio per 100,000 Population:</i>								
ALL DIAGNOSES .....	406	108	505	1,019	395	126	484	1,008
<i>Psychoses</i> .....	271	6	341	903	242	8	300	863
Schizophrenia and paranoid psychoses..	158	4	232	374	141	5	206	362
Affective psychoses...	44	—	52	165	38	—	45	150
Psychoses of senium..	31	—	1	276	29	—	1	257
Other psychoses .....	38	2	56	86	34	2	48	91
<i>Psychoneuroses</i> .....	13	—	20	25	16	2	25	30
<i>Mental retardation</i> .....	101	92	116	67	111	103	127	68
<i>Remaining diagnoses</i> ....	20	11	26	28	26	13	32	47

Note: Total includes those with age unstated.

Source: Richman, A., and Kennedy, Peggy, Estimating Longitudinal Changes in the Number of Patients Hospitalized in Canadian Psychiatric Institutions, *op. cit.*

APPENDIX 8-5  
DISTRIBUTION OF LENGTH OF STAY  
OF RESIDENTS IN PSYCHIATRIC INSTITUTIONS,  
CANADA, JUNE 1, 1931

	Number	Per cent
All .....	31,172	100.0
Under 6 months .....	2,556	8.2
6-18 months .....	4,015	13.0
18-60 months .....	8,511	27.3
5 years or more .....	16,090	51.5

Source: Dominion Bureau of Statistics, *Seventh Census of Canada 1931*, Vol. IX., *op. cit.*

**APPENDIX 8-6**  
**PATIENTS ON BOOKS BY DIAGNOSIS, SEX, AND AGE GROUP, NUMBER AND RATIO PER 100,000 POPULATION, ALL**  
**CARD-REPORTING PSYCHIATRIC INSTITUTIONS, CANADA AND PROVINCES, DECEMBER 31, 1960**

		Male					Female							
		Total	0-14	15-34	35-44	45-64	65+	Total	0-14	15-34	35-44	45-64	65+	
CANADA	All Diagnoses...	No.	40,423	3,434	10,434	6,619	12,919	6,969	35,020	2,481	7,915	5,640	11,401	7,548
	Ratio		448	112	404	568	819	1,072	398	85	317	483	753	1,101
	Schizophrenia & manic depressive	No.	16,868	54	3,591	3,662	6,923	2,618	14,477	34	2,428	3,072	6,119	2,804
	Ratio		187	2	139	314	439	403	165	—	97	263	404	409
	Psychoses of senium.....	No.	2,193	—	1	5	167	2,017	2,665	—	2	5	122	2,535
	Ratio		24	—	—	11	310	30	—	—	—	8	370	
Newfoundland	Mental retardation.....	No.	11,755	3,064	5,161	1,448	1,664	407	9,291	2,188	3,843	1,278	1,576	397
	Ratio		130	100	200	124	106	63	106	75	154	109	104	58
	All Diagnoses...	No.	541	2	130	117	194	96	387	4	71	68	155	87
	Ratio		227	—	190	432	577	750	175	—	114	296	533	674
	Schizophrenia & manic depressive	No.	328	—	75	87	127	38	186	—	26	33	91	34
Prince Edward Island	Ratio		137	—	109	321	378	297	84	—	42	143	313	264
	Psychoses of senium.....	No.	47	—	—	—	9	38	46	—	—	—	5	41
	Ratio		19	—	—	—	—	297	21	—	—	—	—	318
	Mental retardation.....	No.	55	—	24	14	16	—	63	3	21	17	21	1
	Ratio		23	—	35	52	48	—	29	—	34	74	72	—
Prince Edward Island	All Diagnoses	No.	276	2	55	55	109	55	196	1	44	39	63	49
	Ratio		529	—	404	982	1,160	1,100	386	—	333	672	733	891
	Schizophrenia & manic depressive	No.	96	—	19	15	38	24	94	—	21	16	35	22
	Ratio		184	—	140	268	404	480	185	—	159	276	407	400
	Psychoses of senium.....	No.	10	—	—	1	—	9	16	—	—	—	2	14
	Ratio		19	—	—	—	180	35	—	—	—	—	255	
Prince Edward Island	Mental retardation.....	No.	43	1	14	8	18	2	15	—	6	3	4	2
	Ratio		82	—	103	143	191	—	30	—	—	—	—	—



APPENDIX 8-6 (Continued)

		Male					Female							
		Total	0—14	15—34	35—44	45—64	65+	Total	0—14	15—34	35—44	45—64	65+	
Nova Scotia	All Diagnoses...	No. Ratio	629 170	74 58	196 189	90 206	184 298	82 278	612 173	63 52	181 187	95 214	173 291	100 313
	Schizophrenia & manic depressive	No. Ratio	274 74	1 —	97 94	50 114	100 156	24 81	235 66	2 —	68 70	53 119	79 133	33 103
	Psychoses of senium .....	No. Ratio	41 11	— —	— —	— —	6 —	35 119	53 15	— —	— —	— —	5 —	48 150
	Mental retardation .....	No. Ratio	176 47	69 54	73 71	15 34	15 23	3 —	154 44	57 47	60 62	11 25	20 34	6 —
	All Diagnoses ...	No. Ratio	1,180 390	26 23	295 352	222 653	432 887	199 892	1,052 354	23 21	231 274	192 555	348 750	256 1,089
New Brunswick	Schizophrenia & manic depressive	No. Ratio	550 182	2 —	128 153	135 397	233 478	51 229	513 172	— —	99 117	110 318	205 442	97 413
	Psychoses of senium .....	No. Ratio	92 30	— —	— —	— —	5 —	87 390	95 32	— —	— —	— —	13 28	82 349
	Mental retardation .....	No. Ratio	229 76	19 17	100 119	39 115	54 111	15 67	163 55	17 16	56 66	39 113	38 82	13 55
	All Diagnoses ...	No. Ratio	12,313 481	1,032 112	3,717 479	2,242 702	3,849 940	1,459 1,059	10,435 410	723 82	2,725 352	1,842 562	3,565 872	1,573 1,039
	Schizophrenia & manic depressive	No. Ratio	4,666 182	8 —	1,366 176	1,238 388	1,667 407	381 276	3,979 156	5 —	877 113	1,033 315	1,614 395	444 293
Quebec	Psychoses of senium .....	No. Ratio	354 14	— —	— —	1 —	36 9	317 230	383 15	— —	3 —	3 —	24 6	353 233
	Mental retardation .....	No. Ratio	3,867 151	968 105	1,740 224	429 134	553 135	176 128	2,903 114	620 70	1,287 166	351 107	467 114	177 117



APPENDIX 8-6 (Concluded)

		Male					Female							
		Total	0-14	15-34	35-44	45-64	65+	Total	0-14	15-34	35-44	45-64	65+	
Alberta	All Diagnoses . . .	No.	2,679	232	677	404	955	409	1,987	179	439	326	705	338
		Ratio	403	101	358	478	852	838	322	82	246	398	719	833
	Schizophrenia &	No.	1,195	3	226	215	573	178	818	1	115	179	398	125
	manic depressive	Ratio	180	-	120	254	511	365	132	-	64	219	406	308
British Columbia	Psychoses of	No.	115	-	-	-	7	107	124	-	-	-	6	118
	senium, . . . . .	Ratio	17	-	-	-	-	219	20	-	-	-	-	291
	Mental	No.	794	216	358	115	95	10	636	171	269	92	99	5
	retardation . . . . .	Ratio	119	94	189	136	85	20	103	78	151	112	101	-
	All Diagnoses . . .	No.	3,791	337	822	544	1,106	973	3,148	263	613	435	832	999
		Ratio	459	134	364	491	711	1,177	403	109	300	390	575	1,273
	Schizophrenia &	No.	1,677	3	264	348	669	387	1,249	1	184	250	507	305
	manic depressive	Ratio	203	-	117	314	430	468	160	-	90	224	350	389
	Psychoses of	No.	274	-	-	1	14	258	417	-	-	-	11	406
	senium, . . . . .	Ratio	33	-	-	-	-	312	53	-	-	-	8	517
	Mental	No.	1,017	326	455	100	114	21	807	261	330	99	101	13
	retardation . . . . .	Ratio	123	130	201	90	73	25	103	108	161	89	70	17

Note: Incomplete reporting from Nova Scotia and Quebec;  
Total includes those with unstated age.

Source: Data derived from special tabulations provided by Dominion Bureau of Statistics, 1962.

## APPENDIX 8-7

PATIENTS WITH MENTAL RETARDATION ON BOOKS OF PUBLIC MENTAL  
HOSPITALS, NUMBER OF PATIENTS AND MEDIAN STAY (IN MONTHS), BY SEX,  
CANADA AND PROVINCES, DECEMBER 31, 1960

	Male		Female	
	Number	Median Stay	Number	Median Stay
CANADA .....	5,594	117	4,026	120+
Newfoundland .....	55	101	63	120+
Prince Edward Island .....	43	8	15	42
Nova Scotia .....	91	86	78	68
New Brunswick .....	229	46	163	120+
Quebec .....	3,240	114	2,490	120+
Ontario .....	1,378	120+	810	120+
Manitoba .....	46	120+	42	120+
Saskatchewan .....	177	120+	79	120+
Alberta .....	71	120+	48	75
British Columbia .....	264	116	238	115

Source: Data derived from special tabulations provided by Dominion Bureau of Statistics, 1962.



PATIENTS ON BOOKS OF ALL PSYCHIATRIC INSTITUTIONS, NUMBER OF PATIENTS AND MEDIAN STAY  
(IN MONTHS), BY SEX AND AGE GROUP, CANADA AND PROVINCES, DECEMBER 31, 1960

	Male						Female							
	All Ages	0-14	15-34	35-44	45-64	65 and Over	Not Stated	All Ages	0-14	15-34	35-44	45-64	65 and Over	Not Stated
CANADA														
Number .....	40,423	3,434	10,434	6,619	12,919	6,969	48	35,020	2,481	7,915	5,640	11,401	7,548	35
Median time ...	89	34	59	95	120+	116	...	78	34	48	72	120+	96	...
Newfoundland														
Number .....	541	2	130	117	194	96	2	387	4	71	68	155	87	2
Median time ...	80	...	22	87	120+	73	...	77	...	18	83	120+	83	...
Prince Edward Island														
Number .....	276	2	55	55	109	55	—	196	1	44	39	63	49	—
Median time ...	22	...	9	15	83	57	—	44	...	9	18	120+	120+	—
Nova Scotia														
Number .....	629	74	196	90	184	82	3	612	63	181	95	173	100	—
Median time ...	17	26	10	14	38	9	...	11	27	10	7	11	24	—
New Brunswick														
Number .....	1,180	26	295	222	432	199	6	1,052	23	231	192	348	256	2
Median time ...	84	34	38	95	120+	58	...	69	20	28	83	120+	104	...
Quebec														
Number .....	12,313	1,032	3,717	2,242	3,849	1,459	14	10,435	723	2,725	1,842	3,565	1,573	7
Median time ...	86	24	57	91	120+	120+	...	81	29	55	70	120+	120+	...
Ontario														
Number .....	14,083	1,443	3,509	2,160	4,480	2,485	6	13,086	1,027	2,858	1,933	4,121	3,145	2
Median time ...	86	35	65	101	120+	102	...	74	37	48	68	120+	90	...
Manitoba														
Number .....	2,165	129	522	387	707	417	3	2,076	87	382	377	749	472	9
Median time ...	114	30	55	108	120+	120+	...	107	33	41	98	120+	120+	...
Saskatchewan														
Number .....	2,766	157	511	398	903	794	3	2,041	111	371	333	690	529	7
Median time ...	120+	55	74	120+	120+	120+	...	120+	59	93	120+	120+	82	...
Alberta														
Number .....	2,679	232	677	404	955	409	2	1,987	179	439	326	705	338	—
Median time ...	88	27	53	84	120+	120+	...	76	28	36	76	120+	89	—
British Columbia														
Number .....	3,791	337	822	544	1,106	973	9	3,148	263	613	435	832	999	6
Median time ...	90	47	72	81	120+	98	...	64	44	59	48	101	59	...

Source: Data derived from special tabulations provided by Dominion Bureau of Statistics, 1962.

## APPENDIX 8-9

PATIENTS ON BOOKS OF PUBLIC MENTAL HOSPITALS, NUMBER OF PATIENTS  
AND MEDIAN STAY (IN MONTHS), BY SEX AND AGE GROUP,  
CANADA AND PROVINCES, DECEMBER 31, 1960

	Male						
	All Ages	1-14	15-34	35-44	45-64	65 and Over	Not Stated
CANADA							
Number.....	31,233	680	7,368	5,596	11,727	5,824	38
Median time.....	97	27	48	91	120+	120+	...
Newfoundland							
Number.....	541	2	130	117	194	96	2
Median time.....	80	...	22	87	120+	73	...
Prince Edward Island							
Number.....	276	2	55	55	109	55	—
Median time.....	22	...	9	15	83	57	—
Nova Scotia							
Number.....	530	18	165	84	180	81	2
Median time.....	12	32	8	19	41	9	...
New Brunswick							
Number.....	1,174	26	292	220	432	198	6
Median time.....	85	34	39	96	120+	120	...
Quebec							
Number.....	11,004	542	3,469	2,064	3,621	1,297	11
Median time.....	93	30	54	95	120+	120+	...
Ontario							
Number.....	9,887	46	1,990	1,767	4,009	2,071	4
Median time.....	91	9	28	87	120+	93	...
Manitoba							
Number.....	1,548	4	265	281	616	380	2
Median time.....	120+	...	23	104	120+	120+	...
Saskatchewan							
Number.....	2,130	1	268	304	793	761	3
Median time.....	120+	...	31	120	120+	120+	...
Alberta							
Number.....	1,870	5	328	287	851	397	2
Median time.....	108	...	16	78	120+	120+	...
British Columbia							
Number.....	2,273	34	406	417	922	488	6
Median time.....	113	88	50	94	120+	120+	...

**APPENDIX 8-9 (Concluded)**  
**PATIENTS ON BOOKS OF PUBLIC MENTAL HOSPITALS,**  
**NUMBER OF PATIENTS AND MEDIAN STAY (IN MONTHS),**  
**BY SEX AND AGE GROUP,**  
**CANADA AND PROVINCES, DECEMBER 31, 1960**

	Female						
	All Ages	0-14	15-34	35-44	45-64	65 and Over	Not Stated
<b>CANADA</b>							
Number .....	27,420	534	5,203	4,749	10,174	6,733	27
Median time .....	80	33	27	61	120+	102	...
<b>Newfoundland</b>							
Number .....	387	4	71	68	155	87	2
Median time .....	77	...	18	83	120+	83	...
<b>Prince Edw. Island</b>							
Number .....	196	1	44	39	63	49	—
Median time .....	44	...	9	18	120+	—	—
<b>Nova Scotia</b>							
Number .....	536	15	153	95	173	100	—
Median time .....	9	11	7	7	11	24	—
<b>New Brunswick</b>							
Number .....	1,052	23	231	192	348	256	2
Median time .....	69	20	28	83	120+	104	...
<b>Quebec</b>							
Number .....	9,544	425	2,440	1,747	3,385	1,540	7
Median time .....	84	35	53	70	120+	120+	...
<b>Ontario</b>							
Number .....	9,632	27	1,504	1,563	3,651	2,885	2
Median time .....	72	4	16	51	120+	88	...
<b>Manitoba</b>							
Number .....	1,512	1	163	281	610	448	9
Median time .....	120+	...	14	89	120+	120+	...
<b>Saskatchewan</b>							
Number .....	1,393	4	132	203	546	506	2
Median time .....	107	...	19	76	120+	79	...
<b>Alberta</b>							
Number .....	1,277	4	166	230	554	323	—
Median time .....	83	...	9	53	120+	90	—
<b>British Columbia</b>							
Number .....	1,891	30	299	331	689	539	3
Median time .....	81	90	28	51	113	101	...

Source: Data derived from special tabulations provided by Dominion Bureau of Statistics, 1962.

**APPENDIX 8-10**  
**PATIENTS ON BOOKS OF PUBLIC HOSPITALS FOR MENTALLY RETARDED, NUMBER OF PATIENTS AND MEDIAN**  
**STAY (IN MONTHS), BY SEX AND AGE GROUP, CANADA AND PROVINCES, DECEMBER 31, 1960**

	Male						Female							
	All Ages	0-14	15-34	35-44	45-64	65 and Over	Not Stated	All Ages	0-14	15-34	35-44	45-64	65 and Over	Not Stated
CANADA	6,582	2,727	2,769	530	481	70	5	5,948	1,898	2,330	650	864	198	8
	79	35	107	120+	120+	120+	...	94	35	102	120+	120+	120+	...
Nova Scotia	85	56	27	1	—	—	1	76	48	28	—	—	—	—
	31	36	44	...	—	—	...	30	28	33	—	—	—	—
Quebec	643	473	165	1	4	—	—	562	257	166	39	90	10	—
	50	22	91	...	...	—	—	82	24	106	120+	120+	...	—
Ontario	3,164	1,392	1,425	183	144	19	1	2,960	996	1,219	269	339	137	—
	79	61	110	120+	120+	...	...	91	39	100	120+	120+	120+	—
Manitoba	535	124	244	85	74	7	1	476	85	193	74	109	15	—
	99	31	104	120+	120+	...	...	100	34	117	120+	120+	...	—
Saskatchewan	604	155	234	89	103	23	—	601	106	227	119	128	16	5
	120+	56	120+	120+	120+	...	—	120+	61	120+	120+	120+	...	...
Alberta	792	227	344	112	100	9	—	696	175	264	96	148	13	—
	69	27	91	120+	68	...	—	73	29	78	120+	120+	...	—
British Columbia	759	300	330	59	56	12	2	577	231	233	53	50	7	3
	93	41	120+	120+	120+	...	...	116	34	120+	120+	120+	...	...

Source: Data derived from special tabulations provided by Dominion Bureau of Statistics, 1962.



**APPENDIX 9-1**  
**PATIENTS IN HOSPITAL OVER 18 MONTHS, 1931,**  
**NUMBER AND RATIO PER 100,000 POPULATION,**  
**CANADA AND PROVINCES**

	Patients in Hospital over 18 Months, No.	Ratio per 100,000
CANADA .....	24,492	236.3
Prince Edward Island .....	225	255.7
Nova Scotia .....	1,044	203.6
New Brunswick .....	673	164.8
Quebec.....	6,693	232.8
Ontario.....	8,864	258.3
Manitoba .....	1,830	261.4
Saskatchewan .....	1,783	193.4
Alberta.....	1,307	178.6
British Columbia .....	2,073	298.6

Source: Dominion Bureau of Statistics,  
*Census of Canada 1931*, Vol. IX, *op. cit.*, p. 255.

Dominion Bureau of Statistics,  
*Population Estimates 1921-1952*, Reference Paper No. 40, Feb. 1953,  
 Ottawa: Queen's Printer, 1953.



APPENDIX 9-2 (Continued)

APPENDIX 9-2 (Concluded)

		Male					Female							
		Total	0-14	15-34	35-44	45-64	65+	Total	0-14	15-34	35-44	45-64	65+	
Alberta	All institutions	N . . . . .	1,848	127	407	270	762	280	1,357	107	255	224	545	226
		Ratio..	278	55	215	319	680	574	220	49	143	274	556	557
	Public mental hospitals	N . . . . .	1,306	-	133	193	702	276	849	-	57	148	425	219
		Ratio..	196	-	70	228	626	566	137	-	32	181	434	539
British Columbia	Hospitals for mentally defectives	N . . . . .	542	127	274	77	60	4	508	107	198	76	120	7
		Ratio..	81	55	145	91	54	-	82	49	111	93	122	17
	All institutions	N . . . . .	2,665	233	537	349	856	681	2,016	182	378	240	544	666
		Ratio..	323	93	238	315	550	823	258	75	185	215	376	848
	Public mental hospitals	N . . . . .	1,765	32	237	285	759	446	1,319	30	151	186	475	474
		Ratio..	214	13	105	257	488	539	169	12	74	167	328	604
	Hospitals for mentally defectives	N . . . . .	578	199	272	43	51	11	474	152	213	49	50	7
		Ratio..	70	79	120	39	33	13	61	63	104	44	35	-

<sup>1</sup> Incomplete reporting from Nova Scotia and Quebec.

Source: Data derived from special tabulations provided by Dominion Bureau of Statistics, 1962.



## APPENDIX 9-3

MENTAL HOSPITAL PATIENTS REMAINING 2 - 3 YEARS,  
RATIO PER 100,000 POPULATION,<sup>1</sup> BY SEX AND AGE GROUP,  
CANADA AND SELECTED PROVINCES, DECEMBER 31, 1960

	Male				Female			
	15-34	35-44	45-64	65+	15-34	35-44	45-64	65+
CANADA.....	18	20	24	50	12	19	26	58
New Brunswick .....	36	(17)	20	92	20	(23)	39	66
Quebec .....	24	29	28	39	17	24	22	41
Ontario .....	17	20	24	57	13	19	32	68
Manitoba .....	22	22	23	33	8	16	30	59
Saskatchewan .....	11	22	17	116	(4)	19	17	107
Alberta .....	11	11	22	(14)	(5)	20	24	43
British Columbia .....	9	(8)	19	44	(2)	10	17	59

<sup>1</sup>Ratios based on numerators of less than ten are enclosed in brackets.

Source: Data derived from special tabulations provided by Dominion Bureau of Statistics, 1962.



## APPENDIX 10-1

### ESTIMATED HOSPITAL COSTS FOR PATIENTS CONTINUOUSLY HOSPITALIZED BETWEEN DEC. 31, 1955, AND DEC. 31, 1960

There were 33,588 patients in public mental hospitals, and 7,636 patients in hospitals for the mentally retarded at Dec. 31, 1960, who had been admitted before 1956 and had accumulated at least 620,472 years of continuous hospital care (Table 10-5). It is difficult to estimate the total costs for 620,472 years of continuous hospital care. However, it is possible to estimate the hospital expenditure for these patients during the period 1956-1960 on the assumptions that:

On the average 5 per cent of the patients were outside of institutions during the five-year period;

The per diem costs for these patients were the same as per diem costs for all patients in the institution;

The patients had remained in the type of institution where they were reported at the end of 1960.

The number of patient-years spent by all patients in public mental hospitals, and hospitals for mentally retarded during this five-year period is estimated from the average daily census reported by these institutions. Between 1956-1960, a total of 261,104 patient-years were spent in public mental hospitals and 50,359 patient-years in public hospitals for mentally retarded. Operating expenditures during this period were estimated as \$363,711,000 for public mental hospitals and \$83,881,000 for hospitals for mentally retarded.

Patients continuously retained between 1956 and 1960 utilized *61 per cent* of the expenditures of the public mental hospitals and *72 per cent* of expenditures of hospitals for mentally retarded, a total of \$282.6 million.

**APPENDIX 10-1A**  
**ESTIMATED HOSPITAL COSTS FOR PATIENTS CONTINUOUSLY HOSPITALIZED,**  
**CANADA, DEC. 31, 1955 - DEC. 31, 1960**

	Public Mental Hospitals	Public Hospitals for Mentally Retarded
<i>All Patients</i>		
Total number of patient-years in institutions during 5-year period .....	261,104	50,359
Estimated expenditures.....	\$363,711,000 <sup>1</sup>	\$83,881,000
<i>Patients Continuously on Hospital Books between Dec. 31, 1955 and Dec. 31, 1960</i>		
Number of patients.....	33,588	7,636
Estimated number of patient-years in institutions during 5-year period <sup>2</sup> .....	159,543	36,271
Estimated expenditures:		
Amount .....	\$222,227,000	\$60,394,000
Per cent of total .....	61.1	72.0

<sup>1</sup> Estimated from Financial Supplement. Due to incomplete reporting from Quebec, data for 1959 were estimated as the mean of 1958 and 1960 for public mental hospitals.

<sup>2</sup> Estimated on the assumption that on the average 95 per cent of the patients on the books were in institutions during the 5-year period.

Source: Dominion Bureau of Statistics, *Mental Health Statistics, 1956, 1957, 1958, 1959, 1960, op.cit.*,  
*Mental Health Statistics, Financial Supplement, 1956, 1957, 1958, 1959, 1960, op.cit.*



## APPENDIX 10-2A

ADMISSION-EVENTS, AND PATIENTS REMAINING ON BOOKS AT END OF YEAR OF ADMISSION, BY DIAGNOSTIC GROUP, SEX, AND YEAR OF ADMISSION, ALL CARD-REPORTING PSYCHIATRIC INSTITUTIONS, CANADA, 1955-1960

Diagnostic Group	Year of Admission	Male						Female					
		1955	1956	1957	1958	1959	1960	1955	1956	1957	1958	1959	1960
All Diagnoses	First Admissions.....	10,050	10,350	10,676	11,458	12,663	13,167	9,220	9,452	10,016	10,769	12,030	12,379
	Readmissions.....	5,024	5,233	5,901	6,340	7,276	7,982	4,408	4,900	5,376	6,163	7,080	7,703
	Admission-events =100% Persons remaining on books at end of year of admission No. .... % .....	15,074	15,583	16,577	17,798	19,939	21,149	13,628	14,352	15,392	16,932	19,110	20,082
Schizo- phrenia and paranoid psychoses	Admission-events =100% Persons remaining on books at end of year of admission No. .... % .....	5,810	6,046	5,980	6,685	6,909	8,563	5,802	6,248	6,179	6,886	6,992	8,476
		38.5	38.8	36.1	37.6	34.7	40.5	42.6	43.5	40.1	40.7	36.6	42.2
		3,373	3,404	3,588	4,016	4,298	4,826	3,376	3,467	3,794	4,030	4,668	4,972
Affective psychoses	Admission-events =100% Persons remaining on books at end of year of admission No. .... % .....	1,989	2,140	2,120	2,429	2,260	3,049	1,933	2,102	2,150	2,325	2,408	2,986
		59.0	62.9	59.1	60.5	52.6	63.2	57.3	60.6	56.7	57.7	51.6	60.1
		1,615	1,769	1,920	1,916	2,083	2,138	3,006	3,140	3,256	3,537	3,788	4,006
Psychoses of senium	Admission-events =100% Persons remaining on books at end of year of admission No. .... % .....	414	492	599	667	707	765	1,069	1,140	1,157	1,275	1,250	1,348
		38.0	39.1	36.4	34.8	33.9	35.8	35.6	36.3	35.5	36.0	33.0	33.6
		1,338	1,422	1,446	1,493	1,565	1,535	1,165	1,194	1,289	1,283	1,363	1,456
Mental retardation	Admission-events =100% Persons remaining on books at end of year of admission No. .... % .....	689	726	708	768	791	790	747	745	775	773	806	886
		51.5	51.1	49.0	51.4	50.5	51.5	64.1	62.4	60.1	60.2	59.1	60.9
		1,113	923	832	976	1,283	...	756	684	740	864	837	...
	Admission-events =100% Persons remaining on books at end of year of admission No. .... % .....	909	799	641	802	970	...	657	663	568	684	617	...
		81.7	86.6	77.0	82.2	75.6	...	86.9	96.9	76.8	79.2	73.7	...

Source: Dominion Bureau of Statistics, *Mental Health Statistics, 1955, 1956, 1957, 1958, 1959, 1960, op. cit.*  
*Mental Health Statistics, Supplement: Patients in Institutions 1955-57, 1958, 1959, 1960, op. cit.*

## APPENDIX 10-2B

ADMISSION-EVENTS<sup>1</sup>, AND PATIENTS REMAINING ON BOOKS AT END OF YEAR OF ADMISSION, BY AGE GROUP, SEX, AND YEAR OF ADMISSION, ALL CARD-REPORTING PSYCHIATRIC INSTITUTIONS, CANADA, 1955-1960

Age Group (years)	Year of Admission	Male						Female					
		1955	1956	1957	1958	1959	1960	1955	1956	1957	1958	1959	1960
Under 20	Admission-events -100%	1,352	1,311	1,273	1,418	1,843	1,907	1,056	1,078	1,135	1,279	1,466	1,618
	Persons remaining on books at end of year of admission No. ....	985	920	829	950	1,254	1,310	713	703	708	821	877	1,017
20-39	% ....	72.9	70.2	65.1	67.0	68.0	68.7	67.5	65.2	62.4	64.1	59.8	62.9
	Admission-events -100%	5,749	5,798	6,265	6,781	7,453	7,883	5,497	5,679	6,029	6,753	7,643	7,923
40-59	Persons remaining on books at end of year of admission No. ....	2,119	2,235	2,241	2,491	2,497	3,137	2,099	2,256	2,140	2,422	2,454	2,868
	% ....	36.9	38.5	35.8	36.7	33.5	39.8	38.2	39.7	35.5	35.9	32.1	36.2
60 and over	Admission-events -100%	5,083	5,332	5,705	6,189	6,887	7,376	4,482	4,704	5,187	5,688	6,506	6,770
	Persons remaining on books at end of year of admission No. ....	1,513	1,581	1,620	1,806	1,682	2,357	1,682	1,863	1,904	2,072	2,123	2,633
60 and over	% ....	29.8	29.7	28.4	29.2	24.4	32.0	37.5	39.6	36.7	36.4	32.6	38.9
	Admission-events -100%	2,868	3,105	3,312	3,388	3,756	3,983	2,579	2,868	3,030	3,196	3,495	3,771
60 and over	Persons remaining on books at end of year of admission No. ....	1,180	1,295	1,280	1,428	1,476	1,759	1,306	1,414	1,420	1,559	1,538	1,958
	% ....	41.1	41.7	38.6	42.1	39.3	44.2	50.6	49.3	46.9	48.8	44.0	51.9

<sup>1</sup> Admission events include first and readmissions.  
Source: Same as Appendix 10-2A.

## APPENDIX 10-3A

PATIENTS ON BOOKS AT DECEMBER 31, BY SEX, YEARS SINCE ADMISSION,  
AND DIAGNOSTIC GROUP, ALL CARD-REPORTING PSYCHIATRIC  
INSTITUTIONS, CANADA, 1955-1961

Male							
Year	Total	Years Since Admission					
		Under 1	1-2	2-3	3-5	5-10	10+
<i>All Diagnoses</i>							
1955.....	36,006	5,810	2,926	2,186	3,703	6,110	15,271
1956.....	36,890	6,046	2,884	2,335	3,757	6,296	15,572
1957.....	37,624	5,980	2,769	2,249	3,806	6,734	16,086
1958.....	38,125	6,685	2,603	2,050	3,717	6,827	16,243
1959.....	39,174	6,909	2,883	1,974	3,555	7,117	16,736
1960.....	40,423	8,563	3,049	2,070	3,154	7,021	16,566
1961.....	40,865	9,119	4,093	2,228	2,970	6,490	15,965
<i>Schizophrenia and paranoid psychoses</i>							
1955.....	14,855	1,989	940	710	1,174	2,294	7,748
1956.....	15,132	2,140	946	735	1,232	2,264	7,815
1957.....	15,324	2,120	940	697	1,215	2,340	8,012
1958.....	15,426	2,429	883	650	1,150	2,307	8,007
1959.....	15,448	2,260	934	621	1,115	2,325	8,193
1960.....	15,821	3,049	847	603	987	2,277	8,058
1961.....	15,749	3,083	1,389	579	884	2,098	7,716
<i>Affective psychoses</i>							
1955.....	2,370	614	195	129	246	419	767
1956.....	2,442	692	182	128	226	443	771
1957.....	2,469	699	205	122	205	454	784
1958.....	2,371	667	184	131	175	423	791
1959.....	2,411	707	195	126	187	391	805
1960.....	2,359	765	188	107	170	334	795
1961.....	2,287	790	219	98	154	279	747
<i>Mental retardation</i>							
1955.....	9,132	909	805	628	1,221	1,720	3,849
1956.....	9,438	799	797	754	1,189	1,911	3,988
1957.....	9,719	641	624	754	1,285	2,230	4,185
1958.....	9,964	802	537	561	1,377	2,403	4,284
1959.....	10,461	970	610	515	1,228	2,679	4,459
1960.....	10,967	1,329	845	570	969	2,736	4,518
1961.....	11,462	1,612	1,117	773	943	2,528	4,489

## APPENDIX 10-3A (Concluded)

PATIENTS ON BOOKS AT DECEMBER 31, BY SEX, YEARS SINCE ADMISSION,  
AND DIAGNOSTIC GROUP, ALL CARD-REPORTING PSYCHIATRIC  
INSTITUTIONS, CANADA, 1955-1961

Female							
Year	Total	Years Since Admission					
		Under 1	1-2	2-3	3-5	5-10	10+
<i>All Diagnoses</i>							
1955.....	31,519	5,802	2,498	1,864	3,188	5,305	12,862
1956.....	32,176	6,248	2,532	1,886	3,137	5,297	13,076
1957.....	32,687	6,179	2,598	1,870	2,898	5,580	13,562
1958.....	33,127	6,886	2,511	1,783	2,826	5,435	13,686
1959.....	33,873	6,992	2,730	1,821	2,867	5,429	14,034
1960.....	35,020	8,476	2,824	1,893	2,754	5,333	13,740
1961.....	35,621	8,797	3,649	1,917	2,777	5,047	13,434
<i>Schizophrenia and paranoid psychoses</i>							
1955.....	12,463	1,933	771	605	1,051	2,031	6,072
1956.....	12,510	2,102	764	542	1,025	1,947	6,130
1957.....	12,601	2,150	801	528	843	1,978	6,301
1958.....	12,490	2,325	812	505	737	1,798	6,313
1959.....	12,640	2,408	832	534	763	1,650	6,453
1960.....	12,869	2,986	877	494	758	1,556	6,198
1961.....	12,736	2,817	1,192	536	728	1,423	6,040
<i>Affective psychoses</i>							
1955.....	3,444	1,069	243	191	299	471	1,171
1956.....	3,494	1,140	255	148	306	463	1,182
1957.....	3,551	1,157	325	147	244	494	1,184
1958.....	3,545	1,275	274	166	191	467	1,172
1959.....	3,568	1,250	332	151	227	435	1,173
1960.....	3,525	1,348	298	171	212	400	1,096
1961.....	3,452	1,361	332	152	218	348	1,041
<i>Mental retardation</i>							
1955.....	7,374	657	587	438	898	1,443	3,351
1956.....	7,584	663	579	545	864	1,511	3,422
1957.....	7,771	568	488	511	894	1,683	3,627
1958.....	8,059	684	486	448	962	1,766	3,713
1959.....	8,283	617	538	452	886	1,937	3,853
1960.....	8,623	926	526	492	820	1,963	3,896
1961.....	9,204	1,387	796	476	838	1,879	3,828

Source: Dominion Bureau of Statistics,

*Mental Health Statistics, Supplement: Patients in Institutions,*  
1955-57, pp. 57-59; 1958, p. 35; 1959, p. 36; 1960, p. 44, and  
1961, p. 46, *op.cit.*



APPENDIX 10-3B

PATIENTS ON BOOKS AT DECEMBER 31, BY SEX, YEARS SINCE ADMISSION,  
AND AGE GROUP, ALL CARD-REPORTING PSYCHIATRIC INSTITUTIONS,  
CANADA, 1955-1961

Male							
Year	Total	Years Since Admission					
		Under 1	1-2	2-3	3-5	5-10	10 +
<i>Age group under 20 years</i>							
1955.....	4,384	985	720	520	923	863	373
1956.....	4,655	920	747	641	905	1,058	384
1957.....	4,852	829	644	679	1,006	1,309	385
1958.....	4,997	950	528	531	1,150	1,468	370
1959.....	5,522	1,254	671	473	1,048	1,715	361
1960.....	5,871	1,310	921	565	833	1,811	431
1961.....	6,229	1,539	873	790	825	1,701	501
<i>Age group 20-39 years</i>							
1955.....	10,403	2,119	940	740	1,212	2,182	3,210
1956.....	10,593	2,235	869	717	1,265	2,209	3,298
1957.....	10,768	2,241	872	649	1,231	2,333	3,442
1958.....	10,854	2,491	810	587	1,096	2,362	3,508
1959.....	11,055	2,497	887	553	1,050	2,427	3,641
1960.....	11,340	3,137	834	589	900	2,286	3,594
1961.....	11,415	3,192	1,282	548	832	2,094	3,467
<i>Age group 40-59 years</i>							
1955.....	12,546	1,513	662	446	878	1,944	7,103
1956.....	12,664	1,581	643	527	858	1,880	7,175
1957.....	12,892	1,620	617	491	877	1,898	7,389
1958.....	13,001	1,806	635	483	818	1,858	7,401
1959.....	13,060	1,682	632	483	819	1,854	7,590
1960.....	13,391	2,357	602	427	796	1,811	7,398
1961.....	13,510	2,594	1,042	434	698	1,704	7,038
<i>Age group 60 years and over</i>							
1955.....	8,609	1,180	599	475	682	1,117	4,556
1956.....	8,904	1,295	615	445	721	1,141	4,687
1957.....	9,040	1,280	627	425	684	1,182	4,842
1958.....	9,204	1,428	626	442	646	1,125	4,937
1959.....	9,483	1,476	690	463	628	1,105	5,121
1960.....	9,773	1,759	692	487	618	1,097	5,120
1961.....	9,666	1,794	896	456	612	974	4,934

## APPENDIX 10-3B (Concluded)

PATIENTS ON BOOKS AT DECEMBER 31, BY SEX, YEARS SINCE ADMISSION,  
AND AGE GROUP, ALL CARD-REPORTING PSYCHIATRIC INSTITUTIONS,  
CANADA, 1955-1961

Female							
Year	Total	Years Since Admission					
		Under 1	1-2	2-3	3-5	5-10	10 +
<i>Age group under 20 years</i>							
1955.....	3,236	713	543	363	619	680	318
1956.....	3,398	703	498	472	663	736	326
1957.....	3,546	708	475	426	724	876	337
1958.....	3,782	821	496	410	763	979	313
1959.....	4,005	877	545	431	712	1,129	311
1960.....	4,330	1,017	597	478	706	1,180	352
1961.....	4,696	1,277	664	484	731	1,190	350
<i>Age group 20-39 years</i>							
1955.....	8,447	2,099	736	541	967	1,718	2,386
1956.....	8,463	2,256	744	499	869	1,689	2,406
1957.....	8,502	2,140	742	503	780	1,758	2,579
1958.....	8,556	2,422	665	457	728	1,647	2,637
1959.....	8,652	2,454	732	409	741	1,609	2,707
1960.....	8,870	2,868	706	442	659	1,538	2,657
1961.....	9,017	3,013	898	409	650	1,447	2,600
<i>Age group 40-59 years</i>							
1955.....	11,128	1,682	600	462	857	1,833	5,694
1956.....	11,291	1,863	600	452	833	1,773	5,770
1957.....	11,342	1,904	628	423	704	1,797	5,886
1958.....	11,310	2,072	623	389	650	1,634	5,942
1959.....	11,509	2,123	697	440	642	1,560	6,047
1960.....	11,670	2,633	733	422	626	1,463	5,793
1961.....	11,709	2,656	1,020	463	641	1,323	5,606
<i>Age group 60 years and over</i>							
1955.....	8,662	1,306	617	494	741	1,069	4,435
1956.....	8,973	1,414	688	461	767	1,097	4,546
1957.....	9,241	1,420	747	517	686	1,145	4,726
1958.....	9,418	1,559	722	523	684	1,170	4,760
1959.....	9,662	1,538	753	539	769	1,128	4,935
1960.....	10,115	1,958	788	549	760	1,149	4,911
1961.....	10,164	1,851	1,067	561	752	1,082	4,851

Source: Dominion Bureau of Statistics, *Mental Health Statistics, Supplement: Patients in Institutions, 1955-57*, pp. 54-55; 1958, pp. 34-35; 1959, pp. 34-35; 1960, pp. 39-40, and 1961, pp. 41-42, *op. cit.*

## APPENDIX 10-4

PATIENTS ON BOOKS AT DECEMBER 31, 1960, WHO HAD BEEN  
 ADMITTED DURING 1960, BY AGE, DIAGNOSTIC GROUP, AND TYPE OF  
 INSTITUTION, ALL CARD-REPORTING PSYCHIATRIC INSTITUTIONS, CANADA

		All Institutions	Public Mental Hospitals	Hospitals for Mentally Retarded	Other
Age Group (years)	All Patients . . . . .	17,039	13,466	1,433	2,140
	0-14 . . . . .	1,279	304	932	43
	15-39 . . . . .	7,053	5,945	352	756
	40-64 . . . . .	5,831	4,928	129	774
	65 + . . . . .	2,876	2,289	20	567
Diag- nostic Group	Psychoses . . . . .	11,151	9,930	84	1,137
	Schizophrenia. . . .	5,669	5,182	22	465
	Manic-Depressive, .	1,583	1,338	5	240
	Senium. . . . .	1,676	1,474	3	199
	Psychoneuroses. . .	1,334	798	3	533
	Mental Retardation	2,496	1,196	1,275	25
	Epilepsy . . . . .	348	246	46	56
	Other Diagnoses . .	1,710	1,296	25	389

Source: Dominion Bureau of Statistics,  
*Mental Health Statistics, Supplement: Patients in Institutions, 1960, op. cit.* pp. 48-50.

**APPENDIX 10-5**  
**TWO-YEAR RETENTION RATIOS FOR PATIENTS ON BOOKS AT THE END OF THE CALENDAR**  
**YEAR OF ADMISSION, ALL CARD-REPORTING PSYCHIATRIC INSTITUTIONS,**  
**CANADA AND PROVINCES, 1955 AND 1958**

Patients Remaining on Books at End of	CANADA	New- foundland	Prince Edward Island	Nova Scotia	New- Brunswick	Quebec	Ontario	Manitoba	Saskat- chewan	Alberta	British Columbia
	No. = 100%	No.	No.	No.	Admitted in 1955		No.	No.	No.	No.	No.
Calendar year of admission	11,612	159	124	471	436	2,817	4,440	582	763	690	1,130
One Calendar year after yr. of admission	5,416	74	50	78	235	1,637	2,032	223	325	320	442
% . . . . .	46.6	46.5	40.3	16.6	53.9	58.1	45.8	38.3	42.6	46.4	39.1
Two calendar years after yr. of admis- sion	4,119	58	28	45	117	1,382	1,534	157	230	250 <sup>1</sup>	318
% . . . . .	35.5	36.5	22.6	9.6	26.8	49.1	34.5	27.0	30.1	36.2	28.1
Calendar year of admission	13,571	162	148	579	610	3,059	5,402	719	684	897	1,311
One calendar year after yr. of admission	5,613	71	68	77	240	1,526	2,180	353	273	356	469
% . . . . .	41.4	43.8	45.9	13.3	39.3	49.9	40.4	49.1	39.9	39.7	35.8
Two calendar years after yr. of admis- sion	3,963	57	14	74	136	1,007	1,549	278	202	283	363
% . . . . .	29.2	35.2	9.5	12.8	22.3	32.9	28.7	38.7	29.5	31.5	27.7

<sup>1</sup>Error in text; total of 308 in text.

Source: Dominion Bureau of Statistics, *Mental Health Statistics, Supplement: Patients in Institutions, 1955-57, 1958, 1959, and 1960, op. cit.*



**APPENDIX 10-6**  
**TWO-YEAR RETENTION RATIO BY AGE GROUP AND SEX,**  
**FOR PATIENTS ON BOOKS AT THE END OF THE CALENDAR YEAR OF ADMISSION,**  
**ALL CARD-REPORTING PSYCHIATRIC INSTITUTIONS, CANADA, 1955-1959**

Age	Sex	Patients Remaining on Books at End of	Year during which Patients Admitted									
			Number					Percentage				
			1955	1956	1957	1958	1959	1955	1956	1957	1958	1959
Under 20 years	Male	Calendar year of admission .....	985	920	829	950	1,254	100.0	100.0	100.0	100.0	100.0
		One calendar year after year of admission .....	747	644	528	671	921	75.8	70.0	63.7	70.6	73.4
	Female	Two calendar years after year of admission .....	679	531	473	565	790	68.9	57.7	57.1	59.4	63.0
		Calendar year of admission .....	713	703	708	821	877	100.0	100.0	100.0	100.0	100.0
20-39 years	Male	One calendar year after year of admission .....	498	475	496	545	597	69.8	67.6	70.1	66.4	68.1
		Two calendar years after year of admission .....	426	410	431	478	484	59.7	58.3	60.9	58.2	55.2
		Calendar year of admission .....	2,119	2,235	2,241	2,491	2,497	100.0	100.0	100.0	100.0	100.0
	Female	One calendar year after year of admission .....	869	872	810	887	834	31.0	39.0	36.1	35.6	33.4
		Two calendar years after year of admission .....	649	587	553	589	548	30.6	26.3	24.7	23.6	21.9
		Calendar year of admission .....	2,099	2,256	2,140	2,422	2,454	100.0	100.0	100.0	100.0	100.0
	Female	One calendar year after year of admission .....	744	742	665	732	706	35.4	32.9	31.1	30.2	28.8
Two calendar years after year of admission .....		503	457	409	442	409	24.0	20.3	19.1	18.2	16.7	

**APPENDIX 10-6 (Concluded)**  
**TWO-YEAR RETENTION RATIO BY AGE GROUP AND SEX, FOR PATIENTS ON BOOKS AT THE END OF THE**  
**CALENDAR YEAR OF ADMISSION, ALL CARD-REPORTING PSYCHIATRIC INSTITUTIONS, CANADA, 1955-1959**

Age	Sex	Patients Remaining on Books at End of	Year during which Patients Admitted									
			Number					Percentage				
			1955	1956	1957	1958	1959	1955	1956	1957	1958	1959
40-59 years	Male	Calendar year of admission .....	1,513	1,581	1,620	1,806	1,682	100.0	100.0	100.0	100.0	100.0
		One calendar year after year of admission .....	643	617	635	632	602	42.5	39.0	39.2	35.0	35.8
		Two calendar years after year of admission .....	491	483	483	427	434	32.5	30.6	29.8	23.6	25.8
	Female	Calendar year of admission .....	1,682	1,863	1,904	2,072	2,123	100.0	100.0	100.0	100.0	100.0
		One calendar year after year of admission .....	600	628	623	697	733	35.7	33.7	32.7	33.6	34.5
		Two calendar years after year of admission .....	423	389	440	422	463	25.1	20.9	23.1	20.4	21.8
60 yrs. and over	Male	Calendar year of admission .....	1,180	1,295	1,280	1,428	1,476	100.0	100.0	100.0	100.0	100.0
		One calendar year after year of admission .....	615	627	626	690	692	52.1	48.4	48.9	48.3	46.9
		Two calendar years after year of admission .....	425	442	463	487	456	36.0	34.1	36.2	34.1	30.8
	Female	Calendar year of admission .....	1,306	1,414	1,420	1,559	1,538	100.0	100.0	100.0	100.0	100.0
		One calendar year after year of admission .....	688	747	722	753	788	52.7	52.8	50.8	48.3	51.2
		Two calendar years after year of admission .....	517	523	539	549	561	39.6	37.0	38.0	35.2	36.4

Source: Table 10-3B.

APPENDIX 10-7  
TWO-YEAR RETENTION RATIOS BY DIAGNOSTIC GROUP AND SEX, FOR PATIENTS ON BOOKS AT THE END OF THE  
CALENDAR YEAR OF ADMISSION, ALL CARD-REPORTING PSYCHIATRIC INSTITUTIONS, CANADA, 1955-1959

Diag- nostic Group	Sex	Patients Remaining on Books at End of	Year during which Patients Admitted									
			Number					Percentage				
			1955	1956	1957	1958	1959	1955	1956	1957	1958	1959
Schizo- phrenia and paranoid psycho- ses	Male	Calendar year of admission . . . . .	1,989	2,140	2,120	2,429	2,260	100.0	100.0	100.0	100.0	100.0
		One calendar year after year of admission . . . . .	946	940	883	934	847	47.6	43.9	41.7	38.5	37.5
		Two calendar years after year of admission . . . . .	697	650	621	603	579	35.0	30.4	29.3	24.8	25.6
	Female	Calendar year of admission . . . . .	1,933	2,102	2,150	2,325	2,408	100.0	100.0	100.0	100.0	100.0
		One calendar year after year of admission . . . . .	764	801	812	832	877	39.5	38.1	37.8	35.8	36.4
Affec- tive psych- oses	Male	Two calendar years after year of admission . . . . .	528	505	534	494	536	27.3	24.0	24.8	21.2	22.2
		Calendar year of admission . . . . .	614	692	699	667	707	100.0	100.0	100.0	100.0	100.0
		One calendar year after year of admission . . . . .	182	205	184	195	188	29.6	29.6	26.3	29.2	26.6
	Female	Two calendar years after year of admission . . . . .	122	131	126	107	98	19.9	18.9	18.0	16.0	13.8
		Calendar year of admission . . . . .	1,069	1,140	1,157	1,275	1,250	100.0	100.0	100.0	100.0	100.0
		One calendar year after year of admission . . . . .	255	325	274	332	298	23.9	28.5	23.7	26.0	23.8
		Two calendar years after year of admission . . . . .	147	166	151	171	152	13.8	14.6	13.1	13.4	12.2

**APPENDIX 10-7 (Concluded)**  
**TWO-YEAR RETENTION RATIO BY DIAGNOSTIC GROUP AND SEX, FOR PATIENTS ON BOOKS AT THE END OF THE**  
**CALENDAR YEAR OF ADMISSION, ALL CARD-REPORTING PSYCHIATRIC INSTITUTIONS, CANADA, 1955-1959**

Diag- nostic Group	Sex	Patients Remaining on Books at End of	Year during which Patients Admitted									
			Number					Percentage				
			1955	1956	1957	1958	1959	1955	1956	1957	1958	1959
Psych- oses of senium	Male	Calendar year of admission.....	689	726	708	768	791	100.0	100.0	100.0	100.0	100.0
		One calendar year after year of admission.....	378	385	343	410	384	54.9	53.0	48.4	53.4	48.5
		Two calendar years after year of admission.....	241	257	227	266	226	35.0	35.4	32.1	34.6	28.6
		Calendar year of admission.....	747	745	775	773	806	100.0	100.0	100.0	100.0	100.0
Mental retarda- tion	Female	One calendar year after year of admission.....	455	438	434	435	473	60.9	58.8	56.0	56.3	58.7
		Two calendar years after year of admission.....	336	292	316	308	322	45.0	39.2	40.8	39.8	40.0
		Calendar year of admission .....	909	799	641	802	970	100.0	100.0	100.0	100.0	100.0
		One calendar year after year of admission .....	797	624	537	610	845	87.7	78.1	83.8	76.1	87.1
	Male	Two calendar years after year of admission .....	754	561	515	570	773	82.9	70.2	80.3	71.7	79.6
		Calendar year of admission .....	657	663	568	684	617	100.0	100.0	100.0	100.0	100.0
		One calendar year after year of admission .....	579	488	486	538	526	88.1	73.6	85.6	78.7	85.3
		Two calendar years after year of admission .....	511	448	452	492	476	77.8	67.6	79.6	71.9	77.0

Source: Appendix 10-3B.



APPENDIX 13-1

DEMOGRAPHIC CHARACTERISTICS OF SASKATCHEWAN AND BRITISH COLUMBIA,  
BY METROPOLITAN AND NON-METROPOLITAN REGIONS, 1961

	Saskatchewan		British Columbia	
	Regina, Saskatoon	Rest of Province	Metropolitan Vancouver, Victoria	Rest of Province
<i>Population</i> .....	207,667	717,514	944,317	684,765
<i>Age distribution</i>				
Under 15 .....	32%	35%	28%	35%
15-64 .....	60%	56%	60%	57%
65 + .....	8%	10%	12%	8%
<i>Marital distribution</i>				
15 + years, total = 100%				
- Single .....	25%	26%	22%	23%
<i>Ethnic origin</i>				
British Isles .....	48%	38%	65%	52%
<i>Birth place</i>				
Canada .....	82%	84%	71%	78%
Same province .....	67%	73%	44%	51%
<i>Immigrant = 100%</i>				
pre 1921 .....	44%	62%	39%	34%
post 1945 .....	37%	14%	42%	42%
<i>Education</i>				
Population 5 years + not attending school = 100%				
Some university	8%	4%	9%	6%
Some high school ..	54%	39%	58%	51%
<i>Dwellings</i> .....	56,033	189,391	276,081	183,451
Single detached ....	73%	90%	75%	87%
<i>Occupancy</i>				
Under 1 year ....	21%	11%	17%	19%
Over 10 years ...	21%	44%	24%	25%
Built since 1945 ...	53%	36%	49%	56%
With television				
set .....	88%	61%	86%	55%
With automobile ....	75%	74%	71%	72%
Non-family				
households .....	15%	16%	18%	16%
<i>Household heads</i>				
Some university ....	13%	4%	12%	8%
Some high school ..	50%	35%	56%	49%
Canadian-born .....	70%	68%	58%	63%
<i>Post-war</i>				
immigrant .....	7%	2%	13%	10%

APPENDIX 13-1 (Concluded)

	Saskatchewan				British Columbia			
	Regina, Saskatoon		Rest of Province		Metropolitan Vancouver, Victoria		Rest of Province	
<i>Husband-wife families = 100%....</i>								
<i>Wife in labour force.....</i>		27%		19%		24%		19%
<i>Neither husband nor wife in labour force.....</i>		9%		10%		13%		13%

Source: Dominion Bureau of Statistics, *Census of Canada, 1961, op. cit.*

APPENDIX 13-2

PREVIOUS HOSPITALIZATION AMONG PATIENTS REPORTED AS FIRST ADMISSIONS  
TO PROVINCIAL MENTAL HOSPITAL, 30 PER CENT  
SAMPLE OF REPORTED FIRST ADMISSIONS,  
APRIL 1, 1960 - MARCH 31, 1961

	All Diagnoses	Schizo- phrenia and Paranoid Psychoses	Affective Psychoses	Psycho- neuroses	Remaining Diagnoses
ALL ADMISSIONS	529=100.0%	165=100.0%	48=100.0%	133=100.0%	183=100.0%
Patients with previous treatment reported by family					
Treated in psychiatric institution outside British Columbia ...	32=	16	5	2	9
Treated in psychiatric institution within British Columbia prior to 1958.....	14=	3	2	5	4
Total .....	46= 8.7%	19= 11.5%	7= 14.6%	7= 5.3%	13= 7.1%

Source: Drayton, R.M., "The Natural History of Hospital Care for Psychiatric Illnesses." Thesis submitted in partial fulfilment of the requirements for the degree of Doctor of Medicine, University of British Columbia, February 1963.

APPENDIX 13-3

ESTIMATED NUMBER OF ADMISSIONS AND ANNUAL RATE PER 100,000 POPULATION,  
BY DIAGNOSTIC GROUP, AREA, SEX, MARITAL STATUS AND AGE,  
BRITISH COLUMBIA, ALL INSTITUTIONS, 1958-1960

All Diagnostic Groups									
Area	Sex	Marital Status	Estimated Cases — Three Year Total						
			Total	15-64	Under 15	15-34	35-44	45-64	65 +
Metro-politan	Male	Married .....	1,380	980	—	120	300	560	400
		Not married.....	1,444	1,110	144	520	290	300	190
		Total .....	2,824	2,090	144	640	590	860	590
	Female	Married .....	1,660	1,430	—	410	500	520	230
		Not married.....	1,284	720	64	350	140	230	500
		Total .....	2,944	2,150	64	760	640	750	730
	Total .....		5,768	4,240	208	1,400	1,230	1,610	1,320
Non-Metro-politan	Male	Married .....	730	480	—	70	170	240	250
		Not married.....	910	550	160	320	90	140	200
		Total .....	1,640	1,030	160	390	260	380	450
	Female	Married .....	1,040	920	—	360	260	300	120
		Not married.....	418	190	48	130	20	40	180
		Total .....	1,458	1,110	48	490	280	340	300
	Total .....		3,098	2,140	208	880	540	720	750
TOTAL .....		8,866	6,380	416	2,280	1,770	2,330	2,070	
Metro-politan	Male	Rates per 100,000 Population, Annually							
		Married .....	211	180	—	73	186	257	366
		Not married.....	219	470	39	302	1,254	734	377
	Total .....	215	268	39	190	320	332	370	
	Female	Married .....	254	246	—	192	291	265	318
		Not married.....	191	322	18	262	490	345	548
		Total .....	222	267	18	222	320	285	446
Total .....		219	268	28	206	320	308	408	
Non-Metro-politan	Male	Married .....	162	122	—	56	150	156	440
		Not married.....	154	254	47	200	455	388	614
		Total .....	158	169	47	136	196	200	503
	Female	Married .....	234	224	—	217	221	236	359
		Not married.....	88	161	15	156	212	158	558
		Total .....	159	210	15	197	221	223	456
	Total .....		158	188	31	164	208	210	483
TOTAL .....		193	234	30	188	275	270	433	

## APPENDIX 13-3 (Continued)

Functional Psychoses									
Area	Sex	Marital Status	Estimated Cases — Three Year Total						
			Total	15-64	Under 15	15-34	35-44	45-64	65 +
Metro-politan	Male	Married .....	180	160	—	40	70	50	20
		Not married....	480	460	—	260	120	80	20
		Total .....	660	620	—	300	190	130	40
	Female	Married .....	550	520	—	160	180	180	30
		Not married....	390	290	—	140	50	100	100
		Total .....	940	710	—	300	230	280	130
	Total .....		1,600	1,430	—	600	420	410	170
Non-Metro-politan	Male	Married .....	170	130	—	20	20	90	40
		Not married....	180	180	—	120	20	40	—
		Total .....	350	310	—	140	40	130	40
	Female	Married .....	270	260	—	80	80	100	10
		Not married....	110	90	—	50	20	20	20
		Total .....	380	350	—	130	100	120	30
	Total.....		730	660	—	270	140	250	70
TOTAL.....			2,330	2,090	—	870	560	660	240
Metro-politan	Male	Married .....	28	29	—	24	43	23	18
		Not married....	73	195	—	151	519	196	40
		Total .....	50	80	—	89	103	50	25
	Female	Married .....	84	90	—	75	105	92	41
		Not married....	58	130	—	109	175	150	110
		Total .....	71	88	—	88	115	106	80
	Total.....		61	90	—	88	109	78	53
Non-Metro-politan	Male	Married .....	38	33	—	16	18	58	70
		Not married....	31	83	—	75	101	111	—
		Total .....	34	51	—	49	30	68	45
	Female	Married .....	61	63	—	48	68	79	30
		Not married....	23	76	—	60	212	79	62
		Total .....	41	66	—	52	79	79	46
	Total.....		37	58	—	50	54	73	45
TOTAL.....			51	77	—	72	87	76	50



APPENDIX 13-3 (Continued)

Non-functional Psychoses									
Area	Sex	Marital Status	Estimated Cases -- Three Year Total						
			Total	15-64	Under 15	15-34	35-44	45-64	65 +
Metro-politan	Male	Married .....	540	330	—	—	70	260	210
		Not married ....	240	190	—	20	70	100	50
		Total.....	780	520	—	20	140	360	260
	Female	Married .....	310	190	—	20	50	120	120
		Not married ....	270	100	—	20	40	40	170
		Total.....	580	290	—	40	90	160	290
	Total.....		1,360	810	—	60	230	520	550
Non-Metro-politan	Male	Married .....	150	60	—	—	30	30	90
		Not married ....	150	80	—	10	20	50	70
		Total.....	300	140	—	10	50	80	160
	Female	Married .....	120	60	—	40	20	—	60
		Not married ....	110	—	—	—	—	—	110
		Total.....	230	60	—	40	20	—	170
	Total.....		530	200	—	50	70	80	330
TOTAL .....			1,890	1,010	—	110	300	600	880
Metro-politan	Male	Married .....	83	61	—	—	43	119	192
		Not married ....	36	80	—	12	303	244	99
		Total.....	60	67	—	6	76	139	163
	Female	Married .....	47	33	—	9	29	61	166
		Not married ....	40	45	—	16	140	60	186
		Total.....	44	36	—	12	45	61	177
	Total .....		52	51	—	9	60	100	170
Non-Metro-politan	Male	Married .....	33	15	—	—	26	20	158
		Not married ....	26	37	—	6	101	138	215
		Total.....	29	23	—	4	38	42	179
	Female	Married .....	27	15	—	24	17	—	179
		Not married ....	23	—	—	—	—	—	341
		Total.....	25	11	—	16	16	—	259
	Total .....		27	18	—	9	27	23	213
TOTAL .....			41	37	—	9	47	69	184

## APPENDIX 13-3 (Continued)

Psychoneuroses									
Area	Sex	Marital Status	Estimated Cases — Three Year Total						
			Total	15-64	Under 15	15-34	35-44	45-64	65 +
Metro-politan	Male	Married.....	290	250	—	50	80	120	40
		Not married....	190	180	—	80	50	50	10
		Total .....	480	430	—	130	130	170	50
	Female	Married.....	580	560	—	190	230	140	20
		Not married....	220	140	—	80	20	40	80
		Total .....	800	700	—	270	250	180	100
	Total.....		1,280	1,130	—	400	380	350	150
Non-Metro-politan	Male	Married.....	160	150	—	20	80	50	10
		Not married....	110	100	—	50	10	40	10
		Total .....	270	250	—	70	90	90	20
	Female	Married.....	540	530	—	200	160	170	10
		Not married....	50	40	—	20	—	20	10
		Total .....	590	570	—	220	160	190	20
	Total.....		860	820	—	290	250	280	40
TOTAL.....		2,140	1,950	—	690	630	630	190	
Metro-politan	Male	Married.....	44	46	—	30	50	55	37
		Not married....	29	76	—	46	216	122	20
		Total .....	37	55	—	39	70	66	31
	Female	Married.....	89	96	—	89	134	71	28
		Not married....	33	62	—	62	70	60	88
		Total .....	60	87	—	79	125	68	61
	Total.....		48	71	—	59	99	67	46
Non-Metro-politan	Male	Married.....	36	38	—	16	71	32	18
		Not married....	19	46	—	31	50	111	31
		Total .....	26	41	—	24	68	47	22
	Female	Married.....	122	129	—	120	136	134	30
		Not married....	10	34	—	24	—	79	31
		Total .....	64	108	—	88	126	125	30
	Total.....		44	72	—	54	96	82	26
TOTAL.....		47	72	—	57	98	73	40	

## APPENDIX 13-3 (Concluded)

Remaining Diagnoses<sup>1</sup>

Area	Sex	Marital Status	Estimated Cases — Three Year Total						
			Total	15-64	Under 15	15-34	35-44	45-64	65 +
Metro-politan	Male	Married .....	370	240	—	30	80	130	130
		Not married....	534	280	144	160	50	70	110
		Total .....	904	520	144	190	130	200	240
	Female	Married .....	220	160	—	40	40	80	60
		Not married....	404	190	64	110	30	50	150
		Total .....	624	350	64	150	70	130	210
	Total .....		1,528	870	208	340	200	330	450
Non-Metro-politan	Male	Married .....	250	140	—	30	40	70	110
		Not married....	470	190	160	140	40	10	120
		Total .....	720	330	160	170	80	80	230
	Female	Married .....	110	70	—	40	—	30	40
		Not married....	148	60	48	60	—	—	40
		Total .....	258	130	48	100	—	30	80
	Total .....		978	460	208	270	80	110	310
TOTAL .....		2,506	1,330	416	610	280	440	760	
Metro-politan	Male	Married .....	57	44	—	18	50	60	119
		Not married....	81	118	39	93	216	171	218
		Total .....	69	67	39	56	70	77	150
	Female	Married .....	34	28	—	19	23	41	83
		Not married....	60	85	18	86	105	75	164
		Total .....	47	44	18	44	35	49	128
	Total .....		58	55	28	50	52	63	139
Non-Metro-politan	Male	Married .....	56	36	—	24	35	46	193
		Not married....	80	88	47	87	202	28	369
		Total .....	69	54	47	59	60	42	257
	Female	Married .....	25	17	—	24	—	24	120
		Not married....	31	51	15	72	—	—	124
		Total .....	28	25	15	40	—	20	122
	Total .....		50	40	31	50	31	32	200
TOTAL .....		54	49	30	50	44	51	159	

Note: Includes all public, private and federal in-patient facilities for psychiatric patients.

<sup>1</sup> Disorders of character, behaviour and intelligence.

Source: Dominion Bureau of Statistics, special tabulations.

## APPENDIX 13-4

## THE EXPECTATION OF ADMISSION TO A PSYCHIATRIC IN-PATIENT FACILITY

The chances of an individual being admitted to a psychiatric institution at some time in his lifetime may be projected from the age-specific rates of mortality, and first admission. This index, or expectation, represents the probability of psychiatric hospitalization during the lifetime of a group of new-borns. Expectation is influenced by two factors: firstly, the life span of a group of new-borns, that is the length of time that this group of new-borns will live and therefore be exposed to the possibility of admission to a psychiatric hospital; and secondly, the rates of admission to various types of psychiatric in-patient facility.

The expectation of hospitalization is thus made up of calculations which take into consideration both mortality rates and the incidence of hospitalization. This projection is based upon the assumptions that future rates of mortality and rates of first admission will be similar to those upon which expectancy is calculated. If the future rates of first admission were to decrease (which could occur with increased provision of community alternatives to psychiatric hospitalization), expectancy would decrease.

For Ontario, Sloman<sup>1</sup> estimated that, on the basis of 1955-1957 mortality and admission rates, 6.7 per cent of new-born males, and 7.3 per cent of new-born females would be admitted to a public mental hospital or hospital for mentally defectives. These calculations omitted patients admitted to psychiatric units of general hospitals, private and federal hospitals, and therefore minimize the expectation.

Various methods of calculation, differing to some extent, have been utilized for estimating expectation.<sup>2,3,4,5,6</sup> An approximation, based on Sloman's data for Ontario, estimates that with Saskatchewan's 1958-1960 rates of first admission (calculated in Chapter 13) *about one out of eight infants would be expected to be hospitalized at some time in their lives.*<sup>7</sup> It is evident that for both the Ontario

<sup>1</sup>Sloman, Jean G., *op. cit.*

<sup>2</sup>Jaffe, A. J., U.S. Bureau of the Census, *Handbook of Statistical Methods for Demographers* (preliminary edition, second printing), Washington: United States Government Printing Office, 1951.

<sup>3</sup>Fremming, K. H., *The Expectation of Mental Infirmary in a Sample of the Danish Population*, Occasional Papers on Eugenics No. 7, The Eugenics Society and Cassell & Co., 1951.

<sup>4</sup>Goldhammer, H., and Marshall, A. W., *Psychosis and Civilization*, Glencoe, Illinois, The Free Press, 1953.

<sup>5</sup>Norris, V., *Mental Illness in London*, Maudsley Monograph No. 6, Institute of Psychiatry, London: Oxford University Press, 1959.

<sup>6</sup>Kramer, M., in *Causes of Mental Disorder; A Review of Epidemiological Knowledge, 1959*, New York: Milbank Memorial Fund, 1961, pp. 42-43.

<sup>7</sup>Expectation of admission to mental hospitals has been estimated on the basis of first admission and mortality rates during 1960 as 6.5% for the United States and 9.0% for New York State, National Institute of Mental Health, Biometrics Branch, Hospital Studies Section, in *Basic Statistical Terms and Concepts for Epidemiology*, a Reference Document prepared for the Epidemiology of the Mental Diseases, an Institute for Mental Health Statisticians, held at the Johns Hopkins University, August 24-Sept. 3, 1964, dupl., Washington: National Institute of Mental Health, 1964.



and Saskatchewan data about one-third of the admissions are estimated to occur after the age of 65.

EXPECTATION OF  
ADMISSION TO A PSYCHIATRIC IN-PATIENT FACILITY

Age Group	Annual Rates of First Admission per 100,000		Estimated Number of Admissions among 100,000 New-borns	
	Ontario 1956 <sup>1</sup>	Saskatchewan 1958-1960 <sup>2</sup>	Ontario <sup>3</sup>	Saskatchewan <sup>4</sup>
0-14 :.....	31	15	511	247
15-64 .....	87-99	181	4,112	7,518
65 +.....	228	508	2,087	4,650
Total.....			6,710	12,415

<sup>1</sup> Table 12-4 (Ontario).  
<sup>2</sup> Estimated from unduplicated 10 per cent sample of first admissions 1958-1960, Table 13-5.  
<sup>3</sup> Sloman Joan G., *op. cit.* These numbers represent the estimated number of male admissions based on male mortality and admission rates.  
<sup>4</sup> This is an approximate estimate based on the calculation

Saskatchewan admission rates

Ontario admission rates

X

Estimated number of male admissions

for Ontario.

It is recognized that the annual Saskatchewan rates of admission are not sex-specific, while the estimated number of Ontario admissions is based on male admission and mortality rates. This calculation was applied to the estimated number of male admissions since the male expectancy was about 8 per cent lower than the female expectancy for Ontario. Life expectancy was slightly lower in Ontario than in the Prairie Provinces, 1960-1962.<sup>8</sup>

<sup>8</sup>Dominion Bureau of Statistics, *Provincial and Regional Life Tables 1960-1962*, Ottawa: Queen's Printer, 1964.



APPENDIX 14-1A

DISPOSITION AT END OF 1960 FOR FIRST HOSPITAL EVENT, BY DIAGNOSTIC GROUP AND TIME SINCE ADMISSION, UNDUPLICATED 10 PER CENT SAMPLE OF FIRST ADMISSIONS TO PSYCHIATRIC INSTITUTIONS, BRITISH COLUMBIA, 1958-1960

Diagnostic Group	Time since Admission	Discharged on Medical Advice	Discharged against Medical Advice	Dead	Transferred	Remaining on Hosp. Books Dec. 31, 1960
	(days)					
All Diagnoses No. = 871	0-29 .....	281	18	12	56	18
	30-120 .....	286	2	14	15	26
	121-364 .....	41	3	11	7	24
	365+ .....	8	1	7	1	40
	Total .....	616	24	44	79	108
Functional psychoses No. = 233	0-29 .....	36	4	—	9	2
	30-120 .....	121	—	—	4	12
	121-364 .....	23	2	—	4	3
	365+ .....	4	1	—	—	8
	Total .....	184	7	—	17	25
Non-functional psychoses No. = 189	0-29 .....	71	5	8	27	3
	30-120 .....	31	—	7	5	4
	121-364 .....	5	—	6	2	3
	365+ .....	2	—	4	1	5
	Total .....	109	5	25	35	15
Psychoneuroses No. = 214	0-29 .....	96	3	—	3	7
	30-120 .....	92	—	2	2	2
	121-364 .....	5	—	—	—	1
	365+ .....	—	—	—	—	1
	Total .....	193	3	2	5	11
Remaining diagnoses No. = 235	0-29 .....	78	6	4	17	6
	30-120 .....	42	2	5	4	8
	121-364 .....	8	1	5	1	17
	365+ .....	2	—	3	—	26
	Total .....	130	9	17	22	57

Source: Dominion Bureau of Statistics, special tabulations.

## APPENDIX 14-1B

DISPOSITION AT END OF 1960 FOR FIRST HOSPITAL EVENT, BY DIAGNOSTIC GROUP  
AND TIME SINCE ADMISSION, UNDUPLICATED 10 PER CENT SAMPLE OF FIRST  
ADMISSIONS TO PSYCHIATRIC INSTITUTIONS, SASKATCHEWAN, 1958-1960

Diagnostic Group	Time since Admission	Discharged on Medical Advice	Discharged against Medical Advice	Dead	Transferred	Remaining on Hosp. Books Dec. 31, 1960
	(days)					
All Diagnoses No. = 412	0-29 .....	141	7	18	7	7
	30-120 .....	138	1	14	1	7
	121-364 .....	13	—	7	—	17
	365+ .....	1	—	6	—	27
	Total .....	293	8	45	8	58
Functional psychoses No. = 119	0-29 .....	36	2	2	2	3
	30-120 .....	62	—	—	—	1
	121-364 .....	8	—	—	—	—
	365+ .....	—	—	—	—	3
	Total .....	106	2	2	2	7
Non-functional psychoses No. = 105	0-29 .....	14	—	12	3	1
	30-120 .....	16	—	12	1	6
	121-364 .....	4	—	7	—	10
	365+ .....	—	—	6	—	13
	Total .....	34	—	37	4	30
Psychoneuroses No. = 93	0-29 .....	53	2	—	—	1
	30-120 .....	34	1	—	—	—
	121-364 .....	1	—	—	—	—
	365+ .....	1	—	—	—	—
	Total .....	89	3	—	—	1
Remaining diagnoses No. = 95	0-29 .....	38	3	4	2	2
	30-120 .....	26	—	2	—	—
	121-364 .....	—	—	—	—	7
	365+ .....	—	—	—	—	11
	Total .....	64	3	6	2	20

Source: Dominion Bureau of Statistics, special tabulations.



APPENDIX 14-2  
READMISSION RATES  
REPORTED FROM VARIOUS MENTAL HOSPITALS

A. <i>England and Wales</i> <sup>1</sup>	
First Admissions, 1954	
Proportion readmitted within two years of first admission	
Schizophrenia — Males .....	34%
Females.....	31%
B. <i>California State Mental Hospitals</i> <sup>2</sup>	
Discharges, 1950–1955	
Proportion readmitted within one year of discharge .....	
14–16%	
C. <i>United States, 98 State Mental Hospitals</i> <sup>3</sup>	
First Admissions diagnosed as psychotic, 1959–1960	
Proportion of patients discharged within 1–2 months who were	
readmitted within one year.....	
21%	
D. <i>Brandon Hospital for Mental Diseases</i>	

ABSOLUTE READMISSION RATES,  
FIRST ADMISSIONS DISCHARGED FROM BRANDON HOSPITAL  
FOR MENTAL DISEASES, 1953–1957<sup>4</sup>

	One Year		Five Years	
	Male	Female	Male	Female
All Psychoses	15%	14%	32%	33%
Schizophrenia	19	16	39	36
Manic depressive	16	15	27	35
Other psychoses	10	9	26	26

E. <i>Ontario Hospital, London</i> <sup>5</sup>		Probability of Discharge <sup>a)</sup>		Probability of Readmission	
		2 years		4 years	
All diagnoses	1940–42	0.605	0.678	0.162	0.263
	1950–52	0.699	0.706	0.173	0.261
Functional psychoses	1940–42	0.676	0.722	0.183	0.245
	1950–52	0.813	0.813	0.241	0.325

a) Discharge in full, usually following six months of probation.

F. *Crease Clinic, Feb. 1–March 15, 1963*<sup>6</sup>  
Of 193 discharges, 24.8 per cent were readmitted for psychiatric care within one year.

<sup>1</sup>Brooke, Eileen M., A longitudinal study of patients first admitted to mental hospitals, *op. cit.*  
<sup>2</sup>Los Angeles Welfare Planning Council, *The Mental Health Survey of Los Angeles County 1957–1959, op. cit.*

<sup>3</sup>Bahn, Anita K., and Bodian, Carol, A life table method for studying recurrent episodes of illness and care, *J. chron. Dis.* 17:1019–1032, 1964.

<sup>4</sup>Bristow, M.E., Harris, A.A., and Henderson, A.L., *Readmission Experiences of the Cohort of Discharges, Brandon Hospital for Mental Diseases 1953–1957, dupl., n.d.*

<sup>5</sup>Wanklin, J. A., *Studies on the Epidemiology of Mental Illness, Part III, The Discharge and Readmission of Mental Hospital Patients: Cohort Analyses*, thesis submitted to the Faculty of Graduate Studies, The University of Western Ontario, London, 1962.

<sup>6</sup>McFarlane, W.J.G., A Survey of Discharged Psychiatric Patients with Reference to Early Readmission, presented at the Annual Meeting, Canadian Psychiatric Association, Vancouver, June 1964.



APPENDIX 15-1

MENTAL HOSPITAL UTILIZATION, ENGLAND AND WALES, 1954 AND 1955  
First Admissions to Mental Hospitals, England and  
Wales, 1955

	Results of First Hospitalization, 1 Year									
	All Diagnoses								Schizophrenia	
	Male				Female				Male	Female
	All	15-34	35-64	65+	All	15-34	35-64	65+		
Number .....	19,377	5,566	9,712	4,099	26,648	6,282	13,345	7,021	3,367	3,441
Percentage										
Discharged ..	78	92	85	42	77	94	87	40	81	82
Dead .....	11	—	5	40	9	—	3	29	1	1
Remaining ...	11	8	10	19	14	5	10	30	18	17
Percentage of Starting Cohort Discharged and Readmitted Within Two Years of Admission										
	21	24	22	12	21	23	24	13	29	27

Aggregate Duration Hospitalization, All Hospitalizations Within Two Years  
of Admission

	Percentage of Two Years			
	All Diagnoses		Schizophrenia	
	Male	Female	Male	Female
Up to 10½ weeks.....	53	49	26	28
10½ weeks to 6 mos. ....	21	22	30	31
6 mos. to 1 year .....	11	11	17	17
1 year to 2 years.....	16	18	27	24
Continuous.....	7	10	13	12

## APPENDIX 15-1 (Concluded)

Mental Hospital Utilization within Two Years Following  
First Admission, England and Wales, 1954

	Number of First Ad- missions	Percentage of Patients Remaining in Hospital at End of 6 Months	Percentage of Patients Remaining Continuously Hospitalized for 2 Years	Bed Demand within 2 Years Following First Admission (patient-years)		Estimated Days of Care per Patient in 2 Years Following Admission
				No.	%	
All Admissions .....	46,238	20	9	22,761	100	180
Schizophrenia and manic depressive <sup>1</sup> .....	19,648	15	7	9,416	41	174
Senile and presenile .....	6,634	41	31	5,570	24	306
Anxiety, hysterical, and neurotic- depressive reactions .....	7,608	..	1	2,049	9	98

<sup>1</sup> First admission rate for population aged 15-64 was 57 per 100,000.

Source: Brooke, Eileen M.,

*A Cohort Study of Patients First Admitted into Mental Hospitals in 1954 and 1955,*

General Register Office Studies on Medical and Population Subjects No. 18, London:  
Her Majesty's Stationery Office, 1963, pp. 12,35,38, 41, 60.

Brooke, Eileen M.,

Factors affecting the demand for psychiatric beds, *op. cit.*, Tables IV and V.

TRANS-CANADA MEDICAL PLANS REPORT ON PAYMENT FOR PSYCHIATRIC SERVICES AMONG MEMBER PLANS, AS OF DEC. 1962

APPENDIX 16-1

Name of Plan	(1)	(2)	(3)	(4)			(5)		(6)		(7)	(8)
	Re-ferred Office Consltn.	Unre-ferred First Visit	Subse-quent Office Visit	House Calls			Hospital		Electrotherapy		Insulin Hospital	Other Services
				First	Sub-seq.	Nights & Holidays	Con-sulta-tion	Visit	Hospital	Office		
				(a)	(b)	(c)	(a)	(b)	(a)	(b)		
Maritime Medical Care Inc.											course	
Halifax, N.S. ....	25.00	5.00	3.00	4.00	4.00	5.00	25.00	3.00	15.00	15.00	75.00 treatment	10.00
Maritime Hospital Service Association									Initial	Initial		
Moncton, N.B. ....	25.00	Nil	Nil	Nil	Nil	Nil	25.00	5.00	7.50	Subseq. 7.50	Visit 5.00	
Quebec Hospital Service Association.....	Nil	Nil	Nil						Nil	Nil	Nil	
Physicians' Services Incorporated												
Toronto 7, Ontario	25.00	25.00	12.00	3	3	3	25.00	5.00	10.00	10.00	5.00	Detention \$10.00 per hour
Windsor Medical Services, Inc.												
Windsor, Ontario	15.00	10.00	3.50	6.00	6.00	8.00 & 6.00	15.00	3.50	10.00		3.50	





B.C. Medical Services Inc. Vancouver, B.C.	20.00	10.00	15 min. 5.00 30 min. 10.00 1 hour 20.00	10.00	7.50	15.00	20.00	4.00	Initial 10.00 subseq. 5.00		

<sup>1</sup>If not followed by treatment by consultant.

<sup>2</sup>If followed by treatment by consultant.

<sup>3</sup>"\$ 6.00 In. & Sub-, Night \$7.00

\$10.00 Sun. or Hol.

\$ 1.00 over regular fee."

<sup>4</sup>Seldom received. Would be paid at General Practitioner rates.

Source: Report provided by Trans-Canada Medical Plans to the Royal Commission on Health Services, 1963.

APPENDIX 16-1A  
TRANS-CANADA MEDICAL PLANS,  
REPORT ON PAYMENT FOR PSYCHIATRIC SERVICES AMONG MEMBER PLANS, AS OF DECEMBER 1962

Name of Plan	General Policy	Waiting Periods	Maximum Liability	Other Comments
Maritime Medical Care, Inc. Halifax, N.S.		Nil	Nil	Psychotherapy - 1 visit per week at \$3
Maritime Hospital Service Association Moncton, N.B.	Services for mental disorders are limited to medical services and electro-shock therapy provided by a specialist in psychiatry when the participant is a patient in a general hospital for a period not to exceed 30 days for any such hospital admission, but in no event to exceed 70 days during the entire lifetime of the participant.	6 mos.	30 days treatment per admission. 70 days for the life of the member.	
Quebec Hospital Service Association Montreal, P.Q.	For any psychiatric condition where the patient is confined to a general hospital an allowance is made as outlined below.	Nil	70 hospital visits per 12 consecutive months.	Re (5) for first visit \$5.54 per visit from the second to thirty-first day and \$3 per visit from thirty-second through to seventieth day.
Physicians' Services Inc. Toronto 7, Ontario	As a general statement, referred consultations, hospital calls, and the first unreferred visit (during the lifetime of the agreement) are allowed at specialist fees, whereas the balance of services are allowed at the fees listed in the OMA Schedule for Practice in General. Where specialist fees are allowed, our payment is to be consi-	None	Re (2) one only during lifetime of agreement. Re (5) hospital visits after 4 weeks not to exceed \$15 per week. There is a coinsurance factor following this initial period of 2 months inasmuch as the number of allowable psychotherapy services from 3-6 months inclusive is 2 per week and after 6 mos. this is further	Re (3) we assume this refers to psychotherapy. Includes psychotherapy carried out with the aid of narco-analysis and hypnotherapy. Above replies refer to payments to certified psychiatrists. GP rates as set out in OMA Schedule is allowed to other doctors for these services.

	duced as final payment. Where General Practice fees only are allowed, extra billing privileges may be exercised. Also our subscribers' agreement include extra billing privileges by specialists under the Article "Income Limits".		reduced to 2 services per month. No maximum liability per month. No maximum liability per se with regard to subscribers receiving psychiatric care.	
Windsor Medical Services, Inc. Windsor, Ontario		Nil	Nil	Fees quoted in Col. (1) are December 1962. In January 1963 a new Fee Schedule was introduced - new fees indicated in Col. (2),
Manitoba Medical Service Winnipeg, Manitoba	Manitoba Medical Service covers all psychiatric services unless they are available to the subscriber without charge or by virtue of any statute of the Province of Manitoba or Government of Canada or which may be obtained by them from any municipal authority in the Province of Manitoba. This includes the OPD and in-patient electro-shock therapy.	None	None	

APPENDIX 16-1A (Concluded)  
TRANS-CANADA MEDICAL PLANS,  
REPORT ON PAYMENT FOR PSYCHIATRIC SERVICES AMONG MEMBER PLANS, AS OF DECEMBER 1962

Name of Plan	General Policy	Waiting Periods	Maximum Liability	Other Comments
Medical Services (Alta) Inc. Edmonton, Alberta	At the present time there is no fixed financial limitation governing this benefit; the subscriber member is required to obtain a "progress report" from his attending psychiatrist when costs exceed \$500. The report is mailed by the psychiatrist direct to MSA (I) where it may be studied by a Psychiatric Consultant to determine if further expenditure by the Corporation appears justified.	1 year waiting period under non-group contract for all psychiatric treatment (not consultations). No waiting periods under group contract which covers 80% of Plan membership.	No ceiling is provided in contract or professional agreement. There is an informal arrangement between the Corp. and the Alberta Psychiatric Assn., whereby psychiatrists advise subscribers that any amount over \$1,000 per person per contract year will be their personal responsibility. This is a rare situation involving psychoanalysis and/or intense psychotherapy, and the informal arrangements appear to work well to date.	Re (5) for occasional accounts for hospital visits received from psychotherapists when patient is undergoing insulin shock therapy etc. payment is made at GP rates (\$3). Prior to 1960 a ceiling of \$200 per course of psychotherapy treatment was in force. In January 1960, this ceiling was removed. There are now 20 psychiatrists in private practice in Alberta as compared to 12 in 1960.
Medical Services Assn. Vancouver, B. C.	Present arrangements in MSA in respect to psychiatric services contain no limitation in the schedule for psychiatric care. There is however a limitation in the subscribers' contract to the effect that the Plan does not pay services covered by public authority and in this respect certain services are available through Government so that the Plan is able to exercise certain controls on the basis of this limitation. The Plan has in effect an agreement with participating doctors	Nil	One year's treatment for any condition or illness. This is interpreted in psychiatric illness to be a maximum of 15 sessions of psychotherapy or \$300.	



which limits payment of psychotherapy to a total of 15 sessions of one hour each (or 15 hours) after which the exclusion concerning public authority applies. This covers provision for psychotherapy treatment in the doctor's office or in an acute general hospital. Any electric convulsive therapy or hospital care of a case charged on the basis of hospital visits is paid on such basis and not charged to the above noted limitation for psychotherapy.			
B. C. Medical Services, Incorporated Vancouver, B. C.	Similar to MSA.	Nil	
		\$300 plus \$20 for a consultation (psychotherapy only).	Re(3) \$5 for 15 minutes \$10 for 30 minutes \$20 for 1 hour.

Source: Report provided by Trans-Canada Medical Plans to the Royal Commission on Health Services, 1963.



APPENDIX 17-1

THE ABOVE-AVERAGE USE OF MEDICAL SERVICES BY PSYCHIATRIC PATIENTS,  
GROUP HEALTH INSURANCE, NEW YORK

MEDICAL SURGICAL CLAIMS COSTS PER CAPITA  
PSYCHIATRIC USERS AND NON-USERS

Patient Category	Average 1958-60	1958	1959	1960
Users of psychiatric service .....	\$51.61	\$46.26	\$52.49	\$56.07
Non-users in user families .....	38.82	38.82	39.38	38.26
Non-users of psychiatric service .....	29.29	27.29	30.52	30.06

MEDICAL SURGICAL CLAIMS OF 1st YEAR, 2nd YEAR, AND 3rd YEAR PSYCHIATRIC  
USERS, BY YEAR

	1958	1959	1960
1st year users (1959).....	\$50.52	\$57.69	\$55.30
2nd year users (1960) .....	44.94	49.72	57.47
3rd year users (1961).....	41.73	49.04	54.48

AVERAGE ANNUAL PER CAPITA CLAIMS COSTS FOR MEDICAL-SURGICAL SERVICE,  
PSYCHIATRIC PATIENTS AND NON-PSYCHIATRIC PATIENTS, BY  
TYPE OF SERVICE

Type of Service	Average per Capita Claims Costs per Year 1958-60		
	Column 1 Non-psychiatric Patients	Column 2 Psychiatric Patients	Ratio Column 2 to Column 1
Surgery in hospital.....	\$ 4.65	\$ 6.89	1.48
Surgery out of hospital .....	2.30	4.35	1.90
Maternity .....	1.59	2.45	1.54
Medical in hospital .....	1.48	2.62	1.77
Office and home care.....	15.78	25.62	1.62
Consultations .....	3.29	8.84	2.68
Nursing and radiotherapy .....	.20	.84	4.20
TOTAL .....	\$29.29	\$51.61	1.76

Source: Avnet, Helen H., *Psychiatric Insurance, op. cit.*, pp. 156-157.



## APPENDIX 20-1

### PSYCHIATRIC MORBIDITY IN GENERAL PRACTICE, ENGLAND AND WALES

A one-year survey<sup>1</sup> of general practice in England and Wales based on the records of 120 general practitioners, covered 380 thousand patients during the period May 1955—April 1956. During this interval, two-thirds had attended their physician.

Among males, psychoneuroses were recorded for 3.3 per cent of the population-at-risk, or 5.9 per cent of the patients attending, and for 124 visits annually per 1,000 population-at-risk. These rates were higher among females, psychoneuroses being recorded for 7.0 per cent of the population-at-risk, and 10.6 per cent of the patients attending. Higher rates were recorded among those working full-time than among housewives and among full-time employees with family responsibilities than those without.

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<sup>1</sup>Logan, W.P.D., *Morbidity Statistics from General Practice*, Vol. II, Occupation, General Register Office, Studies on Medical & Population Subjects No. 14, London: Her Majesty's Stationery Office, 1960, pp. 107, 108 (Table 12).



CONSULTATION AND PATIENT CONSULTING RATES PER 1,000 POPULATION BY  
THREE AGE GROUPS IN EACH OCCUPATIONAL CATEGORY FOR  
PSYCHONEUROSES (I.S.C. NOS. 310-318)

<i>Male, Aged 15 and Over</i>							
Rate	Age Group	All Categories	Working Full Time	Working Part Time	Retired	Not Working	Not Stated
Patients per 1,000.....	15+	33.4	36.5	35.5	25.6	26.9	8.5
	15-44	32.6	35.3	50.0	47.6	19.2	7.2
	45-64	39.9	40.6	18.5	42.6	89.7	14.5
	65+	23.0	23.2	40.7	23.6	25.6	6.0
Consultations per 1,000.....	15+	123.7	128.2	91.4	118.9	162.9	46.6
	15-44	102.8	109.9	50.0	261.9	76.0	26.9
	45-64	171.3	163.6	129.6	219.1	930.8	104.5
	65+	97.6	87.1	81.3	106.8	100.0	35.9
Per cent of total patients seen with diagnoses of psychoneuroses...	15+	5.9	6.2	4.5	3.6	5.0	5.6
	15-44	6.0	6.2	6.7	7.7	3.7	6.0
	45-64	6.7	6.7	2.7	5.9	12.3	6.8
	65+	3.5	3.7	4.8	3.3	4.7	2.0

*Female, Aged 15 and Over*

Diagnoses	Age Groups	All Categories	Working Full Time		Working Part Time		Not Gainfully Employed		
			With Family Responsibilities	Without Family Responsibilities	With Family Responsibilities	Without Family Responsibilities <sup>1</sup>	Housewives	Without Family Responsibilities Including Retired	Not Stated
Patients per 1,000.....	15+	69.5	88.7	65.9	91.8	77.4	72.9	48.6	22.9
	15-44	68.0	91.7	61.4	96.9	19.6	71.9	27.7	23.6
	45-64	81.8	84.9	79.2	88.4	100.0	82.8	100.4	29.6
	65+	53.5	82.1	59.8	67.3	117.6	58.5	45.0	20.1
Percentage of total patients seen with diagnoses of psychoneuroses..	15+	10.6	11.5	10.1	11.9	10.9	11.3	7.1	8.4
	15-44	10.5	11.6	9.4	12.4	2.7	11.2	4.8	10.7
	45-64	12.6	11.3	12.3	11.6	13.7	13.2	14.1	8.0
	65+	7.7	12.9	10.0	9.1	18.2	8.4	6.2	4.7

<sup>1</sup> Rates based upon small population.

## APPENDIX 21-1

FIRST ADMISSIONS, READMISSIONS, PATIENTS ON BOOKS OR IN RESIDENCE,  
FROM MIDDLESEX, CARLETON AND ESSEX COUNTIES TO ONTARIO  
MENTAL HOSPITALS AND HOSPITAL SCHOOLS, 1958-1960

	Middlesex County			Carleton County			Essex County		
	1958	1959	1960	1958	1959	1960	1958	1959	1960
Estimated population (thousands) .....	198	205	212	304	320	334	255	258	260
First admissions									
Male .....	84	82	91	118	153	146	119	103	104
Female .....	62	86	80	110	153	146	101	82	109
Total .....	146	168	171	228	306	292	220	185	213
Readmissions									
Male .....	26	41	48	47	58	64	46	41	69
Female .....	49	37	59	67	80	80	68	64	68
Total .....	75	78	107	114	138	144	114	105	137
Patients in residence and approved homes									
Male .....	336	360	..	672	682	..	531	526	..
Female .....	386	397	..	696	715	..	441	434	..
Total .....	722	757	..	1,368	1,397	..	972	960	..
Rate per 100,000 .....	364	369	..	450	436	..	381	372	..
Patients on books									
Male .....	..	..	399	..	..	858	..	..	573
Female .....	..	..	472	..	..	896	..	..	524
Total .....	..	..	871	..	..	1,754	..	..	1,097
Rate per 100,000 .....	..	..	411	..	..	526	..	..	422

Source: Ontario, Mental Health Division of the Department of Health, *92nd Annual Report for the Year 1958*, Toronto: Queen's Printer, 1959, p. 62.

Ontario, Mental Health Division of the Department of Health, *93rd Annual Report for the Year 1959*, Toronto: Queen's Printer, 1960, p. 63.

Ontario, Mental Health Branch of the Department of Health, *94th Annual Report for the Year 1960*, *op. cit.*, p. 67.

**APPENDIX 21-2**  
**VARIOUS STATISTICS ON PATIENT MOVEMENT,**  
**ONTARIO HOSPITAL, LONDON, 1958 - 1960**

	1958	1959	1960
<b>First Admissions</b>			
Total.....	388	346	400
Admitted by voluntary application .....	52	38	47
Admitted by two physicians' certificates .....	313	294	337
Age 65 years and over .....	106	93	126
Diagnosed as functional psychoses.....	161	127	146
<b>Readmissions</b>			
Total .....	238	259	261
Admitted by voluntary application.....	62	56	77
Admitted by two physicians' certificates .....	150	183	170
<b>Discharges .....</b>	470	483	492
<b>Deaths .....</b>	128	125	150
<b>Daily average population in residence .....</b>	1,618	1,606	1,598

Source: Ontario, Mental Health Division of the Department of Health, *92nd Annual Report for the Year 1958, op.cit.*, pp. 31, 46, 49, 69, 73.

Ontario, Mental Health Division of the Department of Health, *93rd Annual Report for the Year 1959, op.cit.*, pp. 32, 46, 49, 71, 75.

Ontario, Mental Health Branch of the Department of Health, *94th Annual Report for the Year 1960, op. cit.*, pp. 32, 49, 53, 73, 77.

## APPENDIX 21-3

FIRST ADMISSIONS, READMISSIONS, AND TRANSFERS TO MENTAL HOSPITAL,  
DIAGNOSES OF SEPARATIONS, AND ADMISSIONS FROM MIDDLESEX COUNTY  
PSYCHIATRIC UNITS IN GENERAL HOSPITALS, LONDON, 1958-1960

	St. Joseph's Hospital			Victoria Hospital		
	1958	1959	1960	1958	1959	1960
First admissions .....	331	391	327	507	395	369
Readmissions .....	123	137	159	255	247	230
Transfers to mental hospital .....	36	43	36	70	65	81
Diagnoses of separations						
Psychoses .....	234	290	226	282	258	250
Psychoneuroses .....	158	202	244	267	239	227
Other diagnoses .....	43	20	32	197	134	127
Admissions from Middlesex County						
First admissions .....	..	..	144	..	..	211
Readmissions .....	..	..	84	..	..	145

Source: Ontario, Mental Health Division of the Department of Health, *92nd Annual Report for the Year 1958, op.cit.*, pp. 148, 151.

Ontario, Mental Health Division of the Department of Health, *93rd Annual Report for the Year 1959, op.cit.*, pp. 157, 167.

Ontario, Mental Health Branch of the Department of Health, *94th Annual Report for the Year 1960, op.cit.*, pp. 160, 166, 167.

Ontario, Department of Health, Medical Statistics Branch, *Sixth Annual Statistical Summary, Psychiatric Units of Public Hospitals in Ontario, Calendar Year 1960, dupl.*, June 1961.

**APPENDIX 21-4**  
**VARIOUS STATISTICS ON ACTIVITIES OF PUBLIC PSYCHIATRIC CLINICS,**  
**LONDON, 1958-1960**

	Mental Health Clinic			Victoria Hospital Clinic		
	1958	1959	1960	1958	1959	1960
Active cases, Jan. 1						
16 and under years .....	100	128	192	30	26	26
17 and over .....	85	85	114	224	294	281
Age of first admissions						
16 and under .....	276	347	351	123	102	102
17 - 64.....	177	181	217	558	631	466
65 and over .....	3	3	6	57	46	53
Source of referral for first admissions						
Welfare agencies.....	..	161	162	..	30	15
Health agencies .....	..	173	176	..	652	510
Educational agencies.....	..	47	69	..	7	6
Forensic.....	..	27	17	..	41	38
Other.....	..	123	150	..	49	52
Type of service for terminated cases						
Diagnosis and treatment .....	385	272	298	542	550	451
Consultation, not treated.....	162	240	344	131	220	235
Other services, not treated .....	27	31	13	181	187	160
Psychiatrist interviews .....	1,520	2,135	2,641	3,175	3,090	3,668

Note: Some of the activities of Victoria Hospital Clinic were for hospitalized patients.

Source: Ontario Department of Health, Division of Medical Statistics, *Third Annual Statistical Summary*, Community Mental Health Services in Ontario, Calendar Year 1958, dupl., May 1959.

Ontario Department of Health, Division of Medical Statistics, *Fourth Annual Statistical Summary*, Community Mental Health Services in Ontario, Calendar Year 1959, dupl., April 1960.

Ontario Department of Health, Division of Medical Statistics, *Fifth Annual Statistical Summary*, Community Mental Health Services in Ontario, Calendar Year 1960, dupl., April 1961.



## APPENDIX 21-5

## FREQUENCY OF PSYCHIATRISTS' CARE IN VARIOUS COMMUNITIES

For the age group 15-64 it was estimated that 1.7 per cent of the population in Metropolitan London, and 2.1 per cent of those in the Moose Jaw area attended a psychiatrist during a three-year period. Those ratios excluded patients continuously hospitalized during the period, and those patients seen only by private psychiatrists in London.

In Monroe County, N.Y., 1.1 per cent of the population aged 20-69 who were not receiving psychiatric care at the start of the year attended a psychiatrist in a clinic, hospital or private office during the remainder of the year.<sup>1,2</sup>

During one year (1959-60) one per cent of the population of San Mateo County, California, received direct clinical services from the Mental Health Division of the County Department of Public Health and Welfare.<sup>3</sup>

In a Danish study, 9.7 per cent of the local population, aged 15 and over, were referred for psychiatric consultation during a five-year period. Functional psychoses made up 2.3 per cent, organic psychoses 1.3 per cent, psychoneuroses 2.6 per cent, and other diagnoses 3.5 per cent.<sup>4</sup>

For Aberdeen City, Scotland, 0.74 per cent of the population aged 15 and over, who had not received a psychiatric consultation in the year previous to March 1960, were seen by psychiatrists in the following year.<sup>5</sup>

The results for London and Moose Jaw based on a three-year period do not seem excessively higher than those reported elsewhere.<sup>6</sup>

The rate of attendance was lower for children than adults in both London and Moose Jaw. During the three-year period, attendance for children under the age of 15 was 0.8 per cent in London, and 0.6 per cent in Moose Jaw.

For Monroe County the rate of admission to psychiatric service in 1960 was 0.35 per cent for those under the age of 18.<sup>7</sup>

In Metropolitan Vancouver during 1960, 0.4 per cent of children under the age of 18 received psychiatric consultation for the first time. This included both in- and out-patient, public and private, treatment and consultation services.<sup>8</sup>

<sup>1</sup>Gardner, E.A., *et al.*, All psychiatric experience in a community, *op. cit.*

<sup>2</sup>Miles, H.C., *et al.*, A cumulative survey of all psychiatric experience in Monroe County, N.Y., *Psychiat. Quart.* 38:458-487, 1964.

<sup>3</sup>Heymann, G.M., and Downing, J.J., Some initial approaches to continuous evaluation of a county mental health program—an interim report, *Am. J. publ. Hlth.* 51:980-989, 1961.

<sup>4</sup>Nielsen, J., Home visits by psychiatrists, *Compreh. Psychiat.* 4:442-460, 1963.

<sup>5</sup>Innes, E., and Sharp, G.A., A study of psychiatric patients in North-East Scotland, *J. ment. Sci.* 108: 447-456, 1962.

<sup>6</sup>The rate of attendance at private psychiatrists was estimated for M.S.(A.)I. members as 1.4 per cent during 1961-62 (Table 18-5).

<sup>7</sup>Gardner, E.A., *et al.*, *op. cit.*

<sup>8</sup>Nichol, H., and Richman, A., Utilization of psychiatrists' services for children in a metropolitan area, presented at the Annual Meeting, American Psychiatric Association, Los Angeles, California, May 1964. See Appendix 21-6.

**APPENDIX 21-6**  
**CHILDREN RECEIVING PSYCHIATRISTS' SERVICES FOR THE FIRST TIME, NUMBER AND RATE PER 100,000 POPULATION,**  
**BY SEX, FACILITY, AND AGE GROUP, METROPOLITAN VANCOUVER, 1960**

Facility	Age Group	Male					Female						
		Under 15	Under 5	5-9	10-14	15-17	Un-known	Under 15	Under 5	5-9	10-14	15-17	Un-known
Community clinic .....	Number	238	38	102	98	39	2	105	21	49	35	31	2
	Ratio	215	93	273	303	204		99	54	137	112	160	
Metropolitan	Number	179	9	100	70	21	—	73	2	38	33	7	—
Dept. Public	Ratio	162	22	268	216	110		69	5	106	105	36	
Health .....	Number	81	6	29	46	17	—	64	5	23	36	23	1
	Ratio	73	15	78	142	89		60	13	64	115	119	
Private psychiatrists .....	Number	57	13	20	24	18	1	37	8	11	18	30	—
	Ratio	51	32	53	74	94		35	20	31	57	155	
Miscellaneous facilities .....	Number	555	66	251	238	95	3	279	36	121	122	91	3
	Ratio	502	162	672	736	497		263	92	337	389	470	
Total .....													

Note: Miscellaneous facilities included in-patient care, resident treatment, out-patient department of a general hospital, and psychiatrist consulting to social agencies.

Source: Nichol, H., and Richman, A., Utilization of Psychiatrists' Services for Children in a Metropolitan Area, presented at the Annual Meeting, American Psychiatric Association, Los Angeles, California, May 1964.

## APPENDIX 22-1

PERSONS UNDER 21 YEARS WITH MENTAL RETARDATION,  
REGISTERED IN BRITISH COLUMBIA,  
BY SEX, DEGREE OF MENTAL RETARDATION, AND  
WHETHER INSTITUTIONALIZED, DECEMBER 31, 1960

Degree of Retardation	Cases in Provincial Institutions			Cases in the Community			Total Cases		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Idiocy .....	120	94	214	6	9	15	126	103	229
Imbecility .....	117	63	180	71	67	138	188	130	318
Moron .....	71	41	112	253	224	477	324	265	589
Borderline .....	11	1	12	324	197	521	335	198	533
Mongolism .....	94	66	160	138	129	267	232	195	427
Unspecified .....	80	63	143	552	401	953	632	464	1,096
Total .....	493	328	821	1,344	1,027	2,371	1,837	1,355	3,192

Source: British Columbia, Department of Health Services and Hospital Insurance Division, Vital Statistics, Special Reports No. 62, *Registry for Handicapped Children and Adults, Annual Report, 1960*, March 1962.



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